GenCore version 5.1.6

OM protein - protein search, using sw model

Run on: November 7, 2005, 20:44:40 ; Search time 121.533 Seconds
(without alignments)
273.682 Million cell updates/sec

Title: US-10-811-328-3
Perfect score: 498
Sequence: 1 AVITGACERDVQCGAGTCCA.....CSRFPDGRYRCSMDLKNINF 86

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 2105692 seqs, 386760381 residues

Total number of hits satisfying chosen parameters: 2105692

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : A_Geneseq_16Dec04:*
1: geneseqp1980s:*
2: geneseqp1990s:*
3: geneseqp2000s:*
4: geneseqp2001s:*
5: geneseqp2002s:*
6: geneseqp2003as:*
7: geneseqp2003bs:*
8: geneseqp2004s:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1	498	100.0	86	4	AAB70146	Aab70146 Human G p
2	498	100.0	86	5	ABB76801	Abb76801 Human ZAQ
3	498	100.0	86	5	ABJ05338	Abj05338 Human ZAQ
4	498	100.0	86	5	AAO15529	Aao15529 Human phy
5	498	100.0	86	5	ABB06306	Abb06306 Human G p
6	498	100.0	86	5	AAE24383	Aae24383 Human pro
7	498	100.0	86	7	ADD69104	Add69104 Human ZAQ
8	498	100.0	86	7	ADO05360	Ado05360 Human pro
9	498	100.0	86	8	ADN43256	Adn43256 Amino aci
10	498	100.0	86	8	ADR24003	Adr24003 Human ZAQ
11	498	100.0	87	5	AAE24395	Aae24395 Human pro
12	498	100.0	89	5	AAE24392	Aae24392 Human pro
13	498	100.0	105	3	AAY66745	Aay66745 Membrane-
14	498	100.0	105	3	AAB18453	Aab18453 A human T
15	498	100.0	105	4	AAB70148	Aab70148 Human G p
16	498	100.0	105	4	AAB68427	Aab68427 Amino aci
17	498	100.0	105	4	AAU12406	Aau12406 Human PRO
18	498	100.0	105	4	AAB53096	Aab53096 Human ang
19	498	100.0	105	4	AAB65268	Aab65268 Human PRO
20	498	100.0	105	4	AAB48175	Aab48175 Human PRO
21	498	100.0	105	4	AAB48067	Aab48067 Human ext
22	498	100.0	105	5	AAM50773	Aam50773 Endocrine
23	498	100.0	105	5	AAU83674	Aau83674 Human PRO
24	498	100.0	105	5	ABB84902	Abb84902 Human PRO
25	498	100.0	105	5	AAO15527	Aao15527 Human phy
26	498	100.0	105	5	ABB06308	Abb06308 Human G p
27	498	100.0	105	5	AAE24382	Aae24382 Human pro
28	498	100.0	105	5	ABB95508	Abb95508 Human ang
29	498	100.0	105	6	ABU58083	Abu58083 Human PRO
30	498	100.0	105	6	ABU59161	Abu59161 Novel hum
31	498	100.0	105	6	ABU82673	Abu82673 Human sec
32	498	100.0	105	6	ABO17850	Abo17850 Novel hum
33	498	100.0	105	6	ABU60592	Abu60592 Human sec
34	498	100.0	105	6	ABU80821	Abu80821 Human PRO
35	498	100.0	105	6	ABO33787	Abo33787 Novel hum
36	498	100.0	105	6	ABU13974	Abu13974 Human PRO
37	498	100.0	105	6	ABU08800	Abu08800 Human end
38	498	100.0	105	6	ABU81104	Abu81104 Human PRO
39	498	100.0	105	6	ABU07603	Abu07603 Human ZVE
40	498	100.0	105	6	ABU72559	Abu72559 Novel hum
41	498	100.0	105	6	ABU66804	Abu66804 Human PRO
42	498	100.0	105	6	ABU59885	Abu59885 Novel sec
43	498	100.0	105	6	ABU59308	Abu59308 Human sec
44	498	100.0	105	6	ABO26005	Abo26005 Human PRO
45	498	100.0	105	6	ABO25075	Abo25075 Human sec

ALIGNMENTS

RESULT 1
AAB70146
ID AAB70146 standard; protein; 86 AA.
XX
AC AAB70146;
XX
DT 29-MAY-2001 (first entry)
XX
DE Human G protein-coupled receptor protein-related sequence #2.
XX
KW Human; G protein-coupled receptor protein; nootropic; neuroprotective;
KW hypotensive; orexigenic; antiallergic; antianginal; antimicrobial;
KW antibacterial; gene therapy; Alzheimer's disease; hypertension; anorexia;
KW allergy; angina pectoris; infection; MRSA;
KW multiple resistant Staphylococcus aureus.
XX
OS Homo sapiens.
XX
PN WO200116309-A1.
XX
PD 08-MAR-2001.
XX
PF 24-AUG-2000; 2000WO-JP005685.
XX
PR 27-AUG-1999; 99JP-00241531.
PR 18-JUL-2000; 2000JP-00217474.
XX
PA (TAKE) TAKEDA CHEM IND LTD.
XX
PI Watanabe T, Terao Y, Shintani Y;
XX
DR WPI; 2001-226684/23.
XX
PT New human brain-originated guanosine triphosphate protein-coupled
PT receptor protein, its salt and encoded gene, useful in (gene) diagnosis
PT and development of preventives and remedies for Alzheimer's disease,
PT hypertension and anorexia.
XX
PS Example 4; Fig 9; 119pp; Japanese.
XX
CC The present sequence is provided in a specification relating to a protein
CC or its salt with an amino acid sequence identical or substantially
CC similar to a fully defined sequence of 393 amino acids as given in the
CC specification. The protein is useful in gene diagnosis and development of
CC preventives and remedies for diseases associated with dysfunction of the
CC protein, e.g. Alzheimer's disease, hypertension, anorexia, allergy,
CC angina pectoris and infections (e.g. multiple resistant Staphylococcus
CC aureus. The proteins and DNA encoding the proteins are also useful for

```
CC   the treatment of these diseases by gene therapy
XX
SQ   Sequence 86 AA;

  Query Match             100.0%;  Score 498;  DB 4;  Length 86;
  Best Local Similarity   100.0%;  Pred. No. 7.4e-47;
  Matches   86;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 AVITGACERDVQCGAGTCCAISLWLRGLRMCTPLGREGEECHPGSHKVPFFRKRKHHTCP 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 AVITGACERDVQCGAGTCCAISLWLRGLRMCTPLGREGEECHPGSHKVPFFRKRKHHTCP 60

Qy         61 CLPNLLCSRFPDGRYRCSMDLKNINF 86
              ||||||||||||||||||||||||||
Db         61 CLPNLLCSRFPDGRYRCSMDLKNINF 86


RESULT 2
ABB76801
ID   ABB76801 standard; protein; 86 AA.
XX
AC   ABB76801;
XX
DT   19-JUN-2002  (first entry)
XX
DE   Human ZAQ-1.
XX
KW   Recombinant protein production; drug; reagent; food stuff.
XX
OS   Homo sapiens.
XX
PN   WO200208417-A1.
XX
PD   31-JAN-2002.
XX
PF   25-JUL-2001; 2001WO-JP006392.
XX
PR   25-JUL-2000; 2000JP-00229064.
XX
PA   (TAKE ) TAKEDA CHEM IND LTD.
XX
PI   Ito T,  Tanaka Y,  Kondo M;
XX
DR   WPI; 2002-179906/23.
XX
PT   Production of recombinant proteins in prokaryotes or eukaryotes
PT   particularly with target proteins obtainable through gene recombination
PT   technique, for use as drugs, reagents, raw materials for industries and
PT   feeding stuffs.
XX
PS   Disclosure; Page 133; 137pp; Japanese.
XX
CC   The present invention relates to a method for producing recombinant
CC   proteins. The method comprises preparing a recombinant vector for
CC   transforming a host cell before culturing the obtained transformant,
CC   assaying expression of the reporter gene and confirming high expression
CC   of the reporter gene. The recombinant proteins are useful as drugs,
CC   reagents, raw materials for industries and feeding stuffs. Also, the
CC   proteins are obtainable on large-scale production. The present sequence
CC   was used to illustrate the invention
XX
SQ   Sequence 86 AA;

  Query Match             100.0%;  Score 498;  DB 5;  Length 86;
  Best Local Similarity   100.0%;  Pred. No. 7.4e-47;
  Matches   86;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 AVITGACERDVQCGAGTCCAISLWLRGLRMCTPLGREGEECHPGSHKVPFFRKRKHHTCP 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 AVITGACERDVQCGAGTCCAISLWLRGLRMCTPLGREGEECHPGSHKVPFFRKRKHHTCP 60

Qy         61 CLPNLLCSRFPDGRYRCSMDLKNINF 86
              ||||||||||||||||||||||||||
Db         61 CLPNLLCSRFPDGRYRCSMDLKNINF 86


RESULT 3
ABJ05338
ID   ABJ05338 standard; protein; 86 AA.
XX
AC   ABJ05338;
XX
DT   08-NOV-2002  (first entry)
XX
DE   Human ZAQ protein ligand.
XX
KW   Target peptide production; fusion peptide; protease-susceptible linker;
KW   parathyroid hormone; PTH; high expression rate;
KW   pharmaceutical application.
XX
OS   Homo sapiens.
XX
PN   WO200236762-A1.
XX
PD   10-MAY-2002.
XX
PF   29-OCT-2001; 2001WO-JP009476.
XX
PR   30-OCT-2000; 2000JP-00331170.
PR   27-JUN-2001; 2001JP-00195522.
XX
PA   (TAKE ) TAKEDA CHEM IND LTD.
XX
PI   Yamada T,  Suenaga M;
XX
DR   WPI; 2002-417275/44.
DR   N-PSDB; ABT06826.
XX
PT   Production of target peptide comprises cleavage of fusion peptide with
PT   parathyroid hormone peptide for efficient manufacture of target peptide
PT   without the need to remove N-terminal methionine.
XX
PS   Claim 14; Page 16; 103pp; Japanese.
XX
CC   The invention comprises a method of producing a target peptide. The C-
CC   terminal end of the target peptide is fused via a protease-susceptible
CC   linker to parathyroid hormone (PTH) residues 1-34. The method of the
CC   invention is useful for the clean and efficient production of a target
CC   peptide at a high expression rate on an industrial scale without the need
CC   to remove the N-terminal methionine from the product. The peptides
CC   produced by the method of the invention are suitable for pharmaceutical
CC   and other uses. The present protein sequence was used in the invention
XX
SQ   Sequence 86 AA;

  Query Match             100.0%;  Score 498;  DB 5;  Length 86;
  Best Local Similarity   100.0%;  Pred. No. 7.4e-47;
  Matches   86;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 AVITGACERDVQCGAGTCCAISLWLRGLRMCTPLGREGEECHPGSHKVPFFRKRKHHTCP 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 AVITGACERDVQCGAGTCCAISLWLRGLRMCTPLGREGEECHPGSHKVPFFRKRKHHTCP 60

Qy         61 CLPNLLCSRFPDGRYRCSMDLKNINF 86
              ||||||||||||||||||||||||||
Db         61 CLPNLLCSRFPDGRYRCSMDLKNINF 86


RESULT 4
AAO15529
ID   AAO15529 standard; protein; 86 AA.
XX
AC   AAO15529;
XX
DT   24-OCT-2002  (first entry)
XX
```

DE Human physiologically-active ZAQ ligand-related protein 4.
XX
KW Human; ZAQ ligand; physiologically-active ZAQ ligand; digestive disease;
KW colitis; diarrhoea.
XX
OS Homo sapiens.
XX
PN WO200257443-A1.
XX
PD 25-JUL-2002.
XX
PF 21-JAN-2002; 2002WO-JP000378.
XX
PR 22-JAN-2001; 2001JP-00013027.
PR 17-MAY-2001; 2001JP-00147759.
XX
PA (TAKE) TAKEDA CHEM IND LTD.
XX
PI Yamada T, Suenaga M, Nishimura O;
XX
DR WPI; 2002-566801/60.
XX
PT Industrial production of physiologically-active ZAQ ligand by expressing
PT in transformant prokaryote and refolding in redox buffer, for use in
PT preventing or treating digestive diseases e.g. colitis and diarrhea.
XX
PS Claim 2; Page 79; 93pp; Japanese.
XX
CC The invention comprises a method for producing an active peptide that has
CC the same activity as a ZAQ ligand isolated from eukaryotic cells. The
CC method of the invention is useful for the production of a physiologically
CC -active ZAQ ligand for use in preventing or treating digestive diseases
CC (e.g. colitis and diarrhea). The present amino acid sequence represents a
CC human physiologically active ZAQ ligand-related protein
XX
SQ Sequence 86 AA;

Query Match 100.0%; Score 498; DB 5; Length 86;
Best Local Similarity 100.0%; Pred. No. 7.4e-47;
Matches 86; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 AVITGACERDVQCGAGTCCAISLWLRGLRMCTPLGREGEECHPGSHKVPFFRKRKHHTCP 60
||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db 1 AVITGACERDVQCGAGTCCAISLWLRGLRMCTPLGREGEECHPGSHKVPFFRKRKHHTCP 60

Qy 61 CLPNLLCSRFPDGRYRCSMDLKNINF 86
||||||||||||||||||||||||||
Db 61 CLPNLLCSRFPDGRYRCSMDLKNINF 86

RESULT 5
ABB06306
ID ABB06306 standard; protein; 86 AA.
XX
AC ABB06306;
XX
DT 27-MAY-2002 (first entry)
XX
DE Human G protein-coupled receptor ZAQ ligand protein SEQ ID NO:21.
XX
KW G protein-coupled receptor; ZAQ ligand; physiologically active peptide;
KW ZAQ; antidiarrheic; laxative; drug development; digestive disease;
KW colitis; diarrhoea; constipation; poor-absorption syndrome; gene therapy.
XX
OS Homo sapiens.
XX
PN WO200206483-A1.
XX
PD 24-JAN-2002.
XX
PF 17-JUL-2001; 2001WO-JP006162.
XX
PR 18-JUL-2000; 2000JP-00217442.
PR 02-FEB-2001; 2001JP-00026779.
XX
PA (TAKE) TAKEDA CHEM IND LTD.
XX
PI Ohtaki T, Masuda Y, Takatsu Y, Watanabe T, Terao Y, Shintani Y;
PI Hinuma S;
XX
DR WPI; 2002-188546/24.
DR N-PSDB; ABL49635.
XX
PT Physiologically-active peptides from cows milk, useful for developing
PT drugs to treat ZAQ-mediated diseases, particularly digestive diseases
PT like colitis, diarrhea, constipation and poor-absorption syndrome, by
PT gene therapy.
XX
PS Claim 1; Fig 9; 191pp; Japanese.
XX
CC The present invention describes a peptide containing an amino acid
CC sequence (I) identical to or substantially similar to that of the
CC sequences in ABB06305 or ABB06306, or its salt. (I) has antidiarrheic and
CC laxative activities. The peptides and encoding DNAs from the present
CC invention are useful for developing drugs to treat digestive diseases
CC like colitis, diarrhoea, constipation and poor-absorption syndrome,
CC including gene therapy. The physiologically-active cows milk-originated
CC peptides are applicable as a specific ligand of brain-originated orphan G
CC protein-coupled receptor protein ZAQ. ABL49615 to ABB40659 and ABB06303
CC to ABB06315 represent sequences used in the exemplification of the
CC present invention
XX
SQ Sequence 86 AA;

Query Match 100.0%; Score 498; DB 5; Length 86;
Best Local Similarity 100.0%; Pred. No. 7.4e-47;
Matches 86; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 AVITGACERDVQCGAGTCCAISLWLRGLRMCTPLGREGEECHPGSHKVPFFRKRKHHTCP 60
||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db 1 AVITGACERDVQCGAGTCCAISLWLRGLRMCTPLGREGEECHPGSHKVPFFRKRKHHTCP 60

Qy 61 CLPNLLCSRFPDGRYRCSMDLKNINF 86
||||||||||||||||||||||||||
Db 61 CLPNLLCSRFPDGRYRCSMDLKNINF 86

RESULT 6
AAE24383
ID AAE24383 standard; protein; 86 AA.
XX
AC AAE24383;
XX
DT 04-OCT-2002 (first entry)
XX
DE Human prokineticin 1 mature protein.
XX
KW Human; prokineticin 1; gastrointestinal motility; intestinal cancer;
KW irritable bowel syndrome; gastrointestinal reflux disease; diarrhoea;
KW diabetic gastroparesis; chronic constipation; malabsorptive disorder;
KW inflammatory bowel disorder; analgesic; infectious disease.
XX
OS Homo sapiens.
XX
PN WO200236625-A2.
XX
PD 10-MAY-2002.
XX
PF 01-NOV-2001; 2001WO-US047969.
XX
PR 03-NOV-2000; 2000US-0245882P.
XX
PA (REGC) UNIV CALIFORNIA.
XX
PI Zhou Q, Ehlert FJ;
XX

DR WPI; 2002-479752/51.
DR N-PSDB; AAD39321.
XX
PT New isolated human prokineticin 1 and 2 polypeptides that stimulate
PT gastrointestinal smooth muscle contraction, useful for improving impaired
PT gastrointestinal motility in irritable bowel syndrome, chronic
PT constipation.
XX
PS Claim 1; Page 79-80; 86pp; English.
XX
CC The invention relates to human prokineticin 1 and 2 polypeptides that
CC stimulate gastrointestinal smooth muscle contraction and nucleic acid
CC molecules encoding such polypeptides. Polypeptides of the invention are
CC useful for treating disorders involving impaired gastrointestinal
CC motility. They are useful for stimulating gastrointestinal motility in
CC disorders such as irritable bowel syndrome, diabetic gastroparesis, post-
CC operational ileus, chronic constipation and gastrointestinal reflux
CC disease. The prokineticin antagonists are useful for inhibiting
CC gastrointestinal motility in conditions of diarrhoea, malabsorptive
CC disorders, inflammatory bowel disorders, infectious diseases and
CC intestinal cancers. The antagonists also act as analgesics. The present
CC sequence is human prokineticin 1 mature protein
XX
SQ Sequence 86 AA;

Query Match 100.0%; Score 498; DB 5; Length 86;
Best Local Similarity 100.0%; Pred. No. 7.4e-47;
Matches 86; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 AVITGACERDVQCGAGTCCAISLWLRGLRMCTPLGREGEECHPGSHKVPFFRKRKHHTCP 60
||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db 1 AVITGACERDVQCGAGTCCAISLWLRGLRMCTPLGREGEECHPGSHKVPFFRKRKHHTCP 60

Qy 61 CLPNLLCSRFPDGRYRCSMDLKNINF 86
||||||||||||||||||||||||||
Db 61 CLPNLLCSRFPDGRYRCSMDLKNINF 86

RESULT 7
ADD69104
ID ADD69104 standard; protein; 86 AA.
XX
AC ADD69104;
XX
DT 15-JAN-2004 (first entry)
XX
DE Human ZAQ-related protein - SEQ ID 82.
XX
KW angiogenesis inhibitor; cytostatic; antiinflammatory; cancer;
KW ovarian disease; diabetic retinopathy; inflammatory; ZAQ; Bv8; I5E;
KW human.
XX
OS Homo sapiens.
XX
PN WO2003066860-A1.
XX
PD 14-AUG-2003.
XX
PF 03-FEB-2003; 2003WO-JP001057.
XX
PR 04-FEB-2002; 2002JP-00027299.
XX
PA (TAKE) TAKEDA CHEM IND LTD.
XX
PI Ohtaki T, Masuda Y, Takatsu Y;
XX
DR WPI; 2003-646310/61.
DR N-PSDB; ADD69110.
XX
PT Angiogenesis inhibitors for treatment and prevention of cancer, ovarian
PT diseases and inflammatory disease.
XX
PS Claim 1; SEQ ID NO 82; 308pp; Japanese.
XX
CC The invention relates to a novel angiogenesis inhibitor comprising a
CC compound that inhibits the activity of an amino acid sequence given in
CC the specification. Angiogenesis-related proteins Bv8, ZAQ and I5E were
CC utilised within the method of the invention. The molecules of the
CC invention demonstrate cytostatic and antiinflammatory activities whilst
CC the method may be useful for treatment and prevention of cancer, ovarian
CC diseases, diabetic retinopathy and inflammatory disease. The current
CC sequence is that of the human ZAQ-related protein of the invention.
XX
SQ Sequence 86 AA;

Query Match 100.0%; Score 498; DB 7; Length 86;
Best Local Similarity 100.0%; Pred. No. 7.4e-47;
Matches 86; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 AVITGACERDVQCGAGTCCAISLWLRGLRMCTPLGREGEECHPGSHKVPFFRKRKHHTCP 60
||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db 1 AVITGACERDVQCGAGTCCAISLWLRGLRMCTPLGREGEECHPGSHKVPFFRKRKHHTCP 60

Qy 61 CLPNLLCSRFPDGRYRCSMDLKNINF 86
||||||||||||||||||||||||||
Db 61 CLPNLLCSRFPDGRYRCSMDLKNINF 86

RESULT 8
ADO05360
ID ADO05360 standard; protein; 86 AA.
XX
AC ADO05360;
XX
DT 01-JUL-2004 (first entry)
XX
DE Human prokineticin 1 (PK1), SEQ ID NO:9.
XX
KW Human; prokineticin 1; PK1; circadian rhythm; modulation; drug screening;
KW circadian rhythm disorder; non-24-hour sleep-wake syndrome;
KW rapid time-zone change syndrome; jetlag; work-shift syndrome;
KW delayed phase sleep syndrome; advanced sleep phase syndrome;
KW irregular sleep-wake pattern syndrome; decreased amplitude syndrome;
KW seasonal affective disorder; ultradian rhythm; daydreaming; urination;
KW hunger; infardian rhythm; female sexual receptivity; CNS;
KW central nervous syndrome; PK2 receptor antagonist; PK2 receptor agonist.
XX
OS Homo sapiens.
XX
PN WO2003088904-A2.
XX
PD 30-OCT-2003.
XX
PF 15-APR-2003; 2003WO-US011538.
XX
PR 15-APR-2002; 2002US-0372836P.
XX
PA (REGC) UNIV CALIFORNIA.
XX
PI Zhou Q, Bullock CM;
XX
DR WPI; 2003-854028/79.
XX
PT Screening for compounds for modulating circadian rhythm, for treating
PT seasonal disorders, comprises determining ability of prokineticin-2
PT receptor antagonist or agonist to modulate one or more circadian rhythm
PT function indicia.
XX
PS Disclosure; SEQ ID NO 9; 164pp; English.
XX
CC The invention relates to a method of screening for a compound for its
CC ability to modulate circadian rhythm. The method involved determining the
CC ability of a prokineticin 2 (PK2) receptor agonist or antagonist to
CC modulate one or more indicia or circadian rhythm function. The compound
CC is identified as being a PK2 receptor agonist or antagonist by
CC determining its effect on a predetermined signal such as calcium

CC mobilisation produced by the interaction of PK2 and a receptor selected
CC from the PK2 receptor (e.g., ADO05353) or the PK1 receptor (e.g.,
CC ADO05355). The invention is based on the findings that PK2 expression in
CC the suprachiasmatic nucleus (SCN) oscillates in a circadian fashion, and
CC that PK2 receptor activation modulates circadian rhythm in rats. The
CC invention also relates to a method of modulating the circadian rhythm of
CC an animal by administration of a PK2 receptor antagonist or agonist; a
CC composition comprising a detectably labelled PK2 and an isolated mouse
CC PK2 receptor; nucleic acid constructs, vectors and host cells comprising
CC a PK2 gene promoter (ADO05365-ADO05369) operably linked to a heterologous
CC nucleotide sequence; use of such constructs to identify modulators of
CC circadian rhythm and for the light regulated expression of a nucleic acid
CC molecule in an animal; and oligonucleotides at least 17 bases in length
CC which are able to hybridise to the human PK2 promoter ADO05365. The
CC methods of the invention are useful for identifying compounds for
CC modulating circadian rhythm. Such modulators include PK2 receptor
CC antagonists which promote sleep, and PK2 receptor agonists which promote
CC alertness. The circadian rhythm modulators may be used in the treatment
CC of circadian rhythm disorders such as non-24-hour sleep-wake syndrome,
CC rapid time-zone change syndrome (jetlag), work-shift syndrome, delayed
CC phase sleep syndrome, advanced sleep phase syndrome, irregular sleep-wake
CC pattern syndrome, syndrome associated with decreased amplitude, and
CC seasonal affective disorder. They may also be used for modulating
CC biological rhythms with a periodicity of less than 24 hours (ultradian
CC rhythm) such as daydreaming, urination or hunger, or those with a
CC periodicity of more than 24 hours (infardian rhythm) such as sexual
CC receptivity (heat) in female animals. The present sequence represents
CC human PK1.
XX
SQ Sequence 86 AA;

Query Match 100.0%; Score 498; DB 7; Length 86;
Best Local Similarity 100.0%; Pred. No. 7.4e-47;
Matches 86; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 AVITGACERDVQCGAGTCCAISLWLRGLRMCTPLGREGEECHPGSHKVPFFRKRKHHTCP 60
Db 1 AVITGACERDVQCGAGTCCAISLWLRGLRMCTPLGREGEECHPGSHKVPFFRKRKHHTCP 60

Qy 61 CLPNLLCSRFPDGRYRCSMDLKNINF 86
Db 61 CLPNLLCSRFPDGRYRCSMDLKNINF 86

RESULT 9
ADN43256
ID ADN43256 standard; protein; 86 AA.
XX
AC ADN43256;
XX
DT 15-JUL-2004 (first entry)
XX
DE Amino acid sequence of human prokineticin 1 (PK1).
XX
KW neurogenesis; prokineticin receptor; PKR; neural stem; progenitor cell;
KW neural regeneration; Alzheimer's disease; Parkinson's disease;
KW neurodegenerative disease; prokineticin 1; PK1.
XX
OS Homo sapiens.
XX
PN WO2004032851-A2.
XX
PD 22-APR-2004.
XX
PF 03-OCT-2003; 2003WO-US031626.
XX
PR 04-OCT-2002; 2002US-0416202P.
XX
PA (REGC) UNIV CALIFORNIA.
XX
PI Zhou Q, Cheng MY;
XX
DR WPI; 2004-340794/31.
XX
PT Identifying a compound that modulates neurogenesis comprises contacting a
PT neural stem or progenitor cell with a compound that modulates
PT prokineticin receptor signaling and determining its ability to modulate
PT neurogenesis.
XX
PS Claim 26; Fig 6B; 103pp; English.
XX
CC The specification describes a method for identifying a compound that
CC modulates neurogenesis. The method comprises providing a compound that
CC modulates prokineticin receptor (PKR) signaling, contacting a neural stem
CC or progenitor cell with the compound, and determining the ability of the
CC compound to modulate neurogenesis. The method is useful for modulating
CC neurogenesis or for identifying compounds that modulate neurogenesis.
CC These are used for both ex vivo or in vivo therapeutic applications where
CC neural regeneration is desirable, such as in Alzheimer's disease,
CC Parkinson's disease or other debilitating neurodegenerative diseases. The
CC present sequence represents human prokineticin 1 (PK1), which may be used
CC in the method of the invention to modulate neurogenesis.
XX
SQ Sequence 86 AA;

Query Match 100.0%; Score 498; DB 8; Length 86;
Best Local Similarity 100.0%; Pred. No. 7.4e-47;
Matches 86; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 AVITGACERDVQCGAGTCCAISLWLRGLRMCTPLGREGEECHPGSHKVPFFRKRKHHTCP 60
Db 1 AVITGACERDVQCGAGTCCAISLWLRGLRMCTPLGREGEECHPGSHKVPFFRKRKHHTCP 60

Qy 61 CLPNLLCSRFPDGRYRCSMDLKNINF 86
Db 61 CLPNLLCSRFPDGRYRCSMDLKNINF 86

RESULT 10
ADR24003
ID ADR24003 standard; protein; 86 AA.
XX
AC ADR24003;
XX
DT 21-OCT-2004 (first entry)
XX
DE Human ZAQ-1 ligand protein #1.
XX
KW antiangiogenic; antialcoholic; antiarrhythmic; antiarteriosclerotic;
KW anticonvulsant; antidepressant; antidiabetic; anti-HIV; antimanic;
KW antiparkinsonian; cerebroprotective; cytostatic; eating disorders;
KW endocrine; gastrointestinal; gynecological; hypnotic; hypotensive;
KW neuroleptic; neuroprotective; nootropic; ophthalmological; tranquilizer;
KW vasotropic; vulnerary; monoclonal antibody; human; ZAQL-1; ligand;
KW hybridoma cell; assay; diagnosis; endometrial cancer; endometriosis;
KW ovulation disorder; digestive disease; angiogenesis; pregnancy;
KW eating disorder; sleeping disorder; seasonal depression;
KW reproductive dysfunction; endocrine disease; senile dementia;
KW Alzheimer's disease; aging; cerebral circulatory disorder; head trauma;
KW spinal injury; epilepsy; anxiety; depression; schizophrenia; alcoholism;
KW Parkinson's disease; hypertension; arteriosclerosis; arrhythmia;
KW premenstrual disorder syndrome; glaucoma; AIDS; diabetes.
XX
OS Homo sapiens.
XX
PN WO2004065419-A1.
XX
PD 05-AUG-2004.
XX
PF 21-JAN-2004; 2004WO-JP000498.
XX
PR 22-JAN-2003; 2003JP-00014055.
XX
PA (TAKE) TAKEDA CHEM IND LTD.
XX
PI Matsumoto H, Horikoshi Y, Masuda Y, Ohtaki T;

XX
DR WPI; 2004-593431/57.
XX
PT New monoclonal antibody having high avidity to human ZAQL-1 polypeptide,
PT useful for preventing, treating or diagnosing diseases such as
PT endometrial cancer, ovulation disorders, Alzheimer's disease, AIDS,
PT Parkinson's disease and diabetes.
XX
PS Claim 1; SEQ ID NO 1; 64pp; Japanese.
XX
CC The invention relates to a monoclonal antibody (I) having high avidity to
CC human ZAQL-1 ligand polypeptides, comprising either of two fully defined
CC sequences of 86 amino acids (S1). (I) is ZL1-107a or ZL1-234a produced
CC from hybridoma cells ZL1-107 FERM BP-8256 or ZL1-234 FERM BF-8257. (I) is
CC useful for carrying out assay of the polypeptide containing (S1) which
CC involves reacting (I) with the test-liquid containing the polypeptide or
CC its salt, and measuring the ratio of the polypeptide bound to (I). (I) is
CC useful as a diagnostic or therapeutic agent for diagnosis and/or
CC treatment of diseases such as endometrial cancer, endometriosis or
CC ovulation disorders, digestive diseases, diseases associated with
CC angiogenesis, diseases relating to pregnancy, eating disorder, sleeping
CC disorder, seasonal depression, reproductive dysfunction, endocrine
CC diseases, senile dementia, Alzheimer's disease, various disorders caused
CC by aging, cerebral circulatory disorder, head trauma, spinal injury,
CC epilepsy, anxiety, depression, manic depression, schizophrenia,
CC alcoholism, Parkinson's disease, hypertension, arteriosclerosis,
CC arrhythmia, premenstrual disorder syndrome, glaucoma, AIDS, diabetes,
CC etc. This sequence corresponds to a ZAQ-1 ligand used in the invention.
XX
SQ Sequence 86 AA;

Query Match 100.0%; Score 498; DB 8; Length 86;
Best Local Similarity 100.0%; Pred. No. 7.4e-47;
Matches 86; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 AVITGACERDVQCGAGTCCAISLWLRGLRMCTPLGREGEECHPGSHKVPFFRKRKHHTCP 60
Db 1 AVITGACERDVQCGAGTCCAISLWLRGLRMCTPLGREGEECHPGSHKVPFFRKRKHHTCP 60

Qy 61 CLPNLLCSRFPDGRYRCSMDLKNINF 86
Db 61 CLPNLLCSRFPDGRYRCSMDLKNINF 86

RESULT 11
AAE24395
ID AAE24395 standard; protein; 87 AA.
XX
AC AAE24395;
XX
DT 04-OCT-2002 (first entry)
XX
DE Human prokineticin 1 mutant protein #4.
XX
KW Human; prokineticin 1; gastrointestinal motility; intestinal cancer;
KW irritable bowel syndrome; gastrointestinal reflux disease; diarrhoea;
KW diabetic gastroparesis; chronic constipation; malabsorptive disorder;
KW inflammatory bowel disorder; analgesic; infectious disease; mutant;
KW mutein.
XX
OS Homo sapiens.
OS Synthetic.
XX
PN WO200236625-A2.
XX
PD 10-MAY-2002.
XX
PF 01-NOV-2001; 2001WO-US047969.
XX
PR 03-NOV-2000; 2000US-0245882P.
XX
PA (REGC) UNIV CALIFORNIA.
XX
PI Zhou Q, Ehlert FJ;
XX
DR WPI; 2002-479752/51.
XX
PT New isolated human prokineticin 1 and 2 polypeptides that stimulate
PT gastrointestinal smooth muscle contraction, useful for improving impaired
PT gastrointestinal motility in irritable bowel syndrome, chronic
PT constipation.
XX
PS Example 1; Page 85-86; 86pp; English.
XX
CC The invention relates to human prokineticin 1 and 2 polypeptides that
CC stimulate gastrointestinal smooth muscle contraction and nucleic acid
CC molecules encoding such polypeptides. Polypeptides of the invention are
CC useful for treating disorders involving impaired gastrointestinal
CC motility. They are useful for stimulating gastrointestinal motility in
CC disorders such as irritable bowel syndrome, diabetic gastroparesis, post-
CC operational ileus, chronic constipation and gastrointestinal reflux
CC disease. The prokineticin antagonists are useful for inhibiting
CC gastrointestinal motility in conditions of diarrhoea, malabsorptive
CC disorders, inflammatory bowel disorders, infectious diseases and
CC intestinal cancers. The antagonists also act as analgesics. The present
CC sequence is human prokineticin 1 mutant protein
XX
SQ Sequence 87 AA;

Query Match 100.0%; Score 498; DB 5; Length 87;
Best Local Similarity 100.0%; Pred. No. 7.5e-47;
Matches 86; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 AVITGACERDVQCGAGTCCAISLWLRGLRMCTPLGREGEECHPGSHKVPFFRKRKHHTCP 60
Db 2 AVITGACERDVQCGAGTCCAISLWLRGLRMCTPLGREGEECHPGSHKVPFFRKRKHHTCP 61

Qy 61 CLPNLLCSRFPDGRYRCSMDLKNINF 86
Db 62 CLPNLLCSRFPDGRYRCSMDLKNINF 87

RESULT 12
AAE24392
ID AAE24392 standard; protein; 89 AA.
XX
AC AAE24392;
XX
DT 04-OCT-2002 (first entry)
XX
DE Human prokineticin 1 mutant protein #1.
XX
KW Human; prokineticin 1; gastrointestinal motility; intestinal cancer;
KW irritable bowel syndrome; gastrointestinal reflux disease; diarrhoea;
KW diabetic gastroparesis; chronic constipation; malabsorptive disorder;
KW inflammatory bowel disorder; analgesic; infectious disease; mutant;
KW mutein.
XX
OS Homo sapiens.
OS Synthetic.
XX
PN WO200236625-A2.
XX
PD 10-MAY-2002.
XX
PF 01-NOV-2001; 2001WO-US047969.
XX
PR 03-NOV-2000; 2000US-0245882P.
XX
PA (REGC) UNIV CALIFORNIA.
XX
PI Zhou Q, Ehlert FJ;
XX
DR WPI; 2002-479752/51.
XX
PT New isolated human prokineticin 1 and 2 polypeptides that stimulate

PT gastrointestinal smooth muscle contraction, useful for improving impaired
PT gastrointestinal motility in irritable bowel syndrome, chronic
PT constipation.
XX
PS Example 1; Page 84; 86pp; English.
XX
CC The invention relates to human prokineticin 1 and 2 polypeptides that
CC stimulate gastrointestinal smooth muscle contraction and nucleic acid
CC molecules encoding such polypeptides. Polypeptides of the invention are
CC useful for treating disorders involving impaired gastrointestinal
CC motility. They are useful for stimulating gastrointestinal motility in
CC disorders such as irritable bowel syndrome, diabetic gastroparesis, post-
CC operational ileus, chronic constipation and gastrointestinal reflux
CC disease. The prokineticin antagonists are useful for inhibiting
CC gastrointestinal motility in conditions of diarrhoea, malabsorptive
CC disorders, inflammatory bowel disorders, infectious diseases and
CC intestinal cancers. The antagonists also act as analgesics. The present
CC sequence is human prokineticin 1 mutant protein
XX
SQ Sequence 89 AA;

Query Match 100.0%; Score 498; DB 5; Length 89;
Best Local Similarity 100.0%; Pred. No. 7.7e-47;
Matches 86; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

```
Qy          1 AVITGACERDVQCGAGTCCAISLWLRGLRMCTPLGREGEECHPGSHKVPFFRKRKHHTCP 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          4 AVITGACERDVQCGAGTCCAISLWLRGLRMCTPLGREGEECHPGSHKVPFFRKRKHHTCP 63

Qy         61 CLPNLLCSRFPDGRYRCSMDLKNINF 86
              ||||||||||||||||||||||||||
Db         64 CLPNLLCSRFPDGRYRCSMDLKNINF 89
```

RESULT 13
AAY66745
ID AAY66745 standard; protein; 105 AA.
XX
AC AAY66745;
XX
DT 05-APR-2000 (first entry)
XX
DE Membrane-bound protein PRO1186.
XX
KW Membrane-bound polypeptide; PRO polypeptide; LDL receptor; TIE ligand;
KW pharmaceutical; receptor immunoadhesin; gene mapping.
XX
OS Homo sapiens.
XX
PN WO9963088-A2.
XX
PD 09-DEC-1999.
XX
PF 02-JUN-1999; 99WO-US012252.
XX
PR 02-JUN-1998; 98US-0087607P.
PR 02-JUN-1998; 98US-0087609P.
PR 02-JUN-1998; 98US-0087759P.
PR 03-JUN-1998; 98US-0087827P.
PR 04-JUN-1998; 98US-0088021P.
PR 04-JUN-1998; 98US-0088025P.
PR 04-JUN-1998; 98US-0088028P.
PR 04-JUN-1998; 98US-0088029P.
PR 04-JUN-1998; 98US-0088030P.
PR 04-JUN-1998; 98US-0088033P.
PR 04-JUN-1998; 98US-0088326P.
PR 05-JUN-1998; 98US-0088167P.
PR 05-JUN-1998; 98US-0088202P.
PR 05-JUN-1998; 98US-0088212P.
PR 05-JUN-1998; 98US-0088217P.
PR 09-JUN-1998; 98US-0088655P.
PR 10-JUN-1998; 98US-0088722P.
PR 10-JUN-1998; 98US-0088730P.
PR 10-JUN-1998; 98US-0088734P.
PR 10-JUN-1998; 98US-0088738P.
PR 10-JUN-1998; 98US-0088740P.
PR 10-JUN-1998; 98US-0088741P.
PR 10-JUN-1998; 98US-0088742P.
PR 10-JUN-1998; 98US-0088810P.
PR 10-JUN-1998; 98US-0088811P.
PR 10-JUN-1998; 98US-0088824P.
PR 10-JUN-1998; 98US-0088825P.
PR 10-JUN-1998; 98US-0088826P.
PR 11-JUN-1998; 98US-0088858P.
PR 11-JUN-1998; 98US-0088861P.
PR 11-JUN-1998; 98US-0088863P.
PR 11-JUN-1998; 98US-0088876P.
PR 12-JUN-1998; 98US-0089090P.
PR 12-JUN-1998; 98US-0089105P.
PR 16-JUN-1998; 98US-0089440P.
PR 16-JUN-1998; 98US-0089512P.
PR 16-JUN-1998; 98US-0089514P.
PR 17-JUN-1998; 98US-0089532P.
PR 17-JUN-1998; 98US-0089538P.
PR 17-JUN-1998; 98US-0089598P.
PR 17-JUN-1998; 98US-0089599P.
PR 17-JUN-1998; 98US-0089600P.
PR 17-JUN-1998; 98US-0089653P.
PR 18-JUN-1998; 98US-0089801P.
PR 18-JUN-1998; 98US-0089907P.
PR 18-JUN-1998; 98US-0089908P.
PR 19-JUN-1998; 98US-0089947P.
PR 19-JUN-1998; 98US-0089948P.
PR 19-JUN-1998; 98US-0089952P.
PR 22-JUN-1998; 98US-0090246P.
PR 22-JUN-1998; 98US-0090252P.
PR 22-JUN-1998; 98US-0090254P.
PR 23-JUN-1998; 98US-0090349P.
PR 23-JUN-1998; 98US-0090355P.
PR 24-JUN-1998; 98US-0090429P.
PR 24-JUN-1998; 98US-0090431P.
PR 24-JUN-1998; 98US-0090435P.
PR 24-JUN-1998; 98US-0090444P.
PR 24-JUN-1998; 98US-0090445P.
PR 24-JUN-1998; 98US-0090461P.
PR 24-JUN-1998; 98US-0090472P.
PR 24-JUN-1998; 98US-0090535P.
PR 24-JUN-1998; 98US-0090538P.
PR 24-JUN-1998; 98US-0090540P.
PR 24-JUN-1998; 98US-0090557P.
PR 25-JUN-1998; 98US-0090676P.
PR 25-JUN-1998; 98US-0090678P.
PR 25-JUN-1998; 98US-0090688P.
PR 25-JUN-1998; 98US-0090690P.
PR 25-JUN-1998; 98US-0090691P.
PR 25-JUN-1998; 98US-0090694P.
PR 25-JUN-1998; 98US-0090695P.
PR 25-JUN-1998; 98US-0090696P.
PR 26-JUN-1998; 98US-0090862P.
PR 26-JUN-1998; 98US-0090863P.
PR 01-JUL-1998; 98US-0091358P.
PR 01-JUL-1998; 98US-0091360P.
PR 02-JUL-1998; 98US-0091478P.
PR 02-JUL-1998; 98US-0091486P.
PR 02-JUL-1998; 98US-0091519P.
PR 02-JUL-1998; 98US-0091544P.
PR 02-JUL-1998; 98US-0091626P.
PR 02-JUL-1998; 98US-0091628P.
PR 02-JUL-1998; 98US-0091633P.
PR 02-JUL-1998; 98US-0091646P.
PR 02-JUL-1998; 98US-0091673P.
PR 07-JUL-1998; 98US-0091978P.
PR 07-JUL-1998; 98US-0091982P.
PR 09-JUL-1998; 98US-0092182P.
PR 10-JUL-1998; 98US-0092472P.
PR 20-JUL-1998; 98US-0093339P.

PR 30-JUL-1998; 98US-0094651P.
PR 04-AUG-1998; 98US-0095282P.
PR 04-AUG-1998; 98US-0095285P.
PR 04-AUG-1998; 98US-0095301P.
PR 04-AUG-1998; 98US-0095302P.
PR 04-AUG-1998; 98US-0095318P.
PR 04-AUG-1998; 98US-0095321P.
PR 04-AUG-1998; 98US-0095325P.
PR 10-AUG-1998; 98US-0095916P.
PR 10-AUG-1998; 98US-0095929P.
PR 10-AUG-1998; 98US-0096012P.
PR 11-AUG-1998; 98US-0096143P.
PR 11-AUG-1998; 98US-0096146P.
PR 12-AUG-1998; 98US-0096329P.
PR 17-AUG-1998; 98US-0096757P.
PR 17-AUG-1998; 98US-0096766P.
PR 17-AUG-1998; 98US-0096768P.
PR 17-AUG-1998; 98US-0096773P.
PR 17-AUG-1998; 98US-0096791P.
PR 17-AUG-1998; 98US-0096867P.
PR 17-AUG-1998; 98US-0096891P.
PR 17-AUG-1998; 98US-0096894P.
PR 17-AUG-1998; 98US-0096895P.
PR 17-AUG-1998; 98US-0096897P.
PR 18-AUG-1998; 98US-0096949P.
PR 18-AUG-1998; 98US-0096950P.
PR 18-AUG-1998; 98US-0096959P.
PR 18-AUG-1998; 98US-0096960P.
PR 18-AUG-1998; 98US-0097022P.
PR 19-AUG-1998; 98US-0097141P.
PR 20-AUG-1998; 98US-0097218P.
PR 24-AUG-1998; 98US-0097661P.
PR 26-AUG-1998; 98US-0097951P.
PR 26-AUG-1998; 98US-0097952P.
PR 26-AUG-1998; 98US-0097954P.
PR 26-AUG-1998; 98US-0097955P.
PR 26-AUG-1998; 98US-0097971P.
PR 26-AUG-1998; 98US-0097974P.
PR 26-AUG-1998; 98US-0097978P.
PR 26-AUG-1998; 98US-0097979P.
PR 26-AUG-1998; 98US-0097986P.
PR 26-AUG-1998; 98US-0098014P.
PR 31-AUG-1998; 98US-0098525P.
PR 16-SEP-1998; 98US-0100634P.
PR 12-JAN-1999; 99US-0115565P.
XX
PA (GETH) GENENTECH INC.
XX
PI Baker K, Chen J, Goddard A, Gurney AL, Smith V, Watanabe CK;
PI Wood WI, Yuan J;
XX
DR WPI; 2000-072883/06.
DR N-PSDB; AAZ65091.
XX
PT Membrane-bound proteins and related nucleotide sequences.
XX
PS Claim 12; Fig 266; 822pp; English.
XX
CC The invention provides membrane-bound PRO polypeptides and
CC polynucleotides encoding them. The PRO sequences of the invention were
CC identified based on extracellular domain homology screening. The PRO
CC sequences have homology with proteins including LDL receptors, TIE
CC ligands and various enzymes. The membrane-bound proteins and receptor
CC molecules are useful as pharmaceutical and diagnostic agents. Receptor
CC immunoadhesins, for instance, can be used as therapeutic agents to block
CC receptor-ligand interactions. The membrane-bound proteins can also be
CC employed for screening of potential peptide or small molecule inhibitors
CC of the relevant receptor/ligand interaction. The PRO encoding sequences
CC are useful as hybridization probes, in chromosome and gene mapping and in
CC the generation of antisense RNA and DNA. PRO nucleic acid sequences will
CC also be useful for the preparation of PRO polypeptides, especially by
CC recombinant techniques
XX

SQ Sequence 105 AA;

Query Match 100.0%; Score 498; DB 3; Length 105;
Best Local Similarity 100.0%; Pred. No. 9.1e-47;
Matches 86; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 AVITGACERDVQCGAGTCCAISLWLRGLRMCTPLGREGEECHPGSHKVPFFRKRKHHTCP 60
Db 20 AVITGACERDVQCGAGTCCAISLWLRGLRMCTPLGREGEECHPGSHKVPFFRKRKHHTCP 79

Qy 61 CLPNLLCSRFPDGRYRCSMDLKNINF 86
Db 80 CLPNLLCSRFPDGRYRCSMDLKNINF 105

RESULT 14
AAB18453
ID AAB18453 standard; protein; 105 AA.
XX
AC AAB18453;
XX
DT 15-JAN-2001 (first entry)
XX
DE A human TANGO 266 polypeptide.
XX
KW TANGO 266; TANGO 216; TANGO 261; TANGO 262; TANGO 267;
KW cellular proliferation; cellular differentiation; cellular adhesion;
KW von Willebrand factor-associated disorder; cell trafficking; cancer;
KW hematopoietic associated disease; atelectasis; pulmonary congestion;
KW oedema; emphysema; chronic bronchitis; bronchial asthma; bronchiectasis;
KW intestinal disorder; spleen associated disease; renal disorder;
KW cardiovascular disorder; ischemic heart disease; hydrocephalus;
KW brain herniation; iatrogenic disease; inflammation; meningitis;
KW Alzheimer's Disease; cerebral toxoplasmosis; Parkinson's disease;
KW multiple sclerosis; hydrocephalus; encephalitis; hepatic disorder.
XX
OS Homo sapiens.
XX
FH Key Location/Qualifiers
FT Peptide 1. .19
FT /note= "signal sequence"
FT Protein 20. .106
FT /note= "mature protein"
XX
PN WO200052022-A1.
XX
PD 08-SEP-2000.
XX
PF 01-MAR-2000; 2000WO-US005226.
XX
PR 01-MAR-1999; 99US-0122458P.
XX
PA (MILL-) MILLENNIUM PHARM INC.
XX
PI Barnes TM, Holtzman DA, Sharp JD, Fraser CC;
XX
DR WPI; 2000-579269/54.
DR N-PSDB; AAA75155.
XX
PT Novel human and murine secreted proteins designated TANGO 216, 261, 262,
PT 266 and 267 useful as modulating agents of cellular processes, e.g. for
PT treating cancer.
XX
PS Claim 8; Fig 14; 175pp; English.
XX
CC The present sequence represents a human TANGO 266 polypeptide. The
CC specification also describes TANGO 262, TANGO 216, TANGO 261, and TANGO
CC 267. The TANGO polypeptides can be used to modulate cellular
CC proliferation, modulate cellular differentiation and/or modulate cellular
CC adhesion. The proteins can be used to treat any von Willebrand factor-
CC associated disorder, regulate extracellular matrix structuring, cellular
CC adhesion, and cell trafficking and/or migration, modulate cellular
CC interactions, modulate cell adhesion in proliferative disorders, such as

CC cancer, modulate the proliferation, differentiation, and/or function of
CC cells that appear in the bone marrow, and leukocytes, treat bone marrow,
CC blood and hematopoietic associated diseases and disorders, atelectasis,
CC pulmonary congestion or oedema, emphysema, chronic bronchitis, bronchial
CC asthma and bronchiectasis, intestinal disorders, spleen associated
CC diseases, modulate renal disorders, treat cardiovascular disorders such
CC as ischemic heart disease, modulate the proliferation, differentiation,
CC and/or function of bone and cartilage cells and to treat bone and/or
CC cartilage associated diseases or disorder. They may also be used to treat
CC disorders associated with the ovaries, cerebral oedema, hydrocephalus,
CC brain herniations, iatrogenic disease, inflammations, bacterial and viral
CC meningitis, Alzheimer's Disease, cerebral toxoplasmosis, Parkinson's
CC disease, multiple sclerosis, brain cancers, hydrocephalus and
CC encephalitis, and treat hepatic disorders
XX
SQ Sequence 105 AA;

Query Match 100.0%; Score 498; DB 3; Length 105;
Best Local Similarity 100.0%; Pred. No. 9.1e-47;
Matches 86; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 AVITGACERDVQCGAGTCCAISLWLRGLRMCTPLGREGEECHPGSHKVPFFRKRKHHTCP 60
Db 20 AVITGACERDVQCGAGTCCAISLWLRGLRMCTPLGREGEECHPGSHKVPFFRKRKHHTCP 79

Qy 61 CLPNLLCSRFPDGRYRCSMDLKNINF 86
Db 80 CLPNLLCSRFPDGRYRCSMDLKNINF 105

RESULT 15
AAB70148
ID AAB70148 standard; protein; 105 AA.
XX
AC AAB70148;
XX
DT 29-MAY-2001 (first entry)
XX
DE Human G protein-coupled receptor protein-related sequence #4.
XX
KW Human; G protein-coupled receptor protein; nootropic; neuroprotective;
KW hypotensive; orexigenic; antiallergic; antianginal; antimicrobial;
KW antibacterial; gene therapy; Alzheimer's disease; hypertension; anorexia;
KW allergy; angina pectoris; infection; MRSA;
KW multiple resistant Staphylococcus aureus.
XX
OS Homo sapiens.
XX
PN WO200116309-A1.
XX
PD 08-MAR-2001.
XX
PF 24-AUG-2000; 2000WO-JP005685.
XX
PR 27-AUG-1999; 99JP-00241531.
PR 18-JUL-2000; 2000JP-00217474.
XX
PA (TAKE) TAKEDA CHEM IND LTD.
XX
PI Watanabe T, Terao Y, Shintani Y;
XX
DR WPI; 2001-226684/23.
XX
PT New human brain-originated guanosine triphosphate protein-coupled
PT receptor protein, its salt and encoded gene, useful in (gene) diagnosis
PT and development of preventives and remedies for Alzheimer's disease,
PT hypertension and anorexia.
XX
PS Example 4; Page 113; 119pp; Japanese.
XX
CC The present sequence is provided in a specification relating to a protein
CC or its salt with an amino acid sequence identical or substantially
CC similar to a fully defined sequence of 393 amino acids as given in the
CC specification. The protein is useful in gene diagnosis and development of
CC preventives and remedies for diseases associated with dysfunction of the
CC protein, e.g. Alzheimer's disease, hypertension, anorexia, allergy,
CC angina pectoris and infections (e.g. multiple resistant Staphylococcus
CC aureus. The proteins and DNA encoding the proteins are also useful for
CC the treatment of these diseases by gene therapy
XX
SQ Sequence 105 AA;

Query Match 100.0%; Score 498; DB 4; Length 105;
Best Local Similarity 100.0%; Pred. No. 9.1e-47;
Matches 86; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 AVITGACERDVQCGAGTCCAISLWLRGLRMCTPLGREGEECHPGSHKVPFFRKRKHHTCP 60
Db 20 AVITGACERDVQCGAGTCCAISLWLRGLRMCTPLGREGEECHPGSHKVPFFRKRKHHTCP 79

Qy 61 CLPNLLCSRFPDGRYRCSMDLKNINF 86
Db 80 CLPNLLCSRFPDGRYRCSMDLKNINF 105

RESULT 16
AAB68427
ID AAB68427 standard; protein; 105 AA.
XX
AC AAB68427;
XX
DT 23-JUL-2001 (first entry)
XX
DE Amino acid sequence of a human Zven2 polypeptide.
XX
KW Zven1; 3p21.1; 3p14.3; Zven2; small cell lung cancer; wound healing;
KW antitumour; antiinflammatory; necrosis; tissue growth; digestive enzyme;
KW cellular differentiation; gastrointestinal cell contractility;
KW gastrointestinal motility; inflammation; hypermotility; diarrhoea;
KW Crohn's disease.
XX
OS Homo sapiens.
XX
PN WO200136465-A2.
XX
PD 25-MAY-2001.
XX
PF 14-NOV-2000; 2000WO-US031278.
XX
PR 16-NOV-1999; 99US-00442164.
PR 25-FEB-2000; 2000US-00511879.
PR 19-APR-2000; 2000US-00552203.
PR 07-JUN-2000; 2000US-0210332P.
XX
PA (ZYMO) ZYMOGENETICS INC.
XX
PI Sheppard PO, Bishop PD, Whitmore TE, Thompson PP;
XX
DR WPI; 2001-355611/37.
DR N-PSDB; AAF85427.
XX
PT Novel isolated Zven polypeptide useful for inhibiting proliferation of
PT tumor cells, for treating small cell cancer of lung, to promote wound
PT healing, and for treating Crohn's disease and diarrhea.
XX
PS Claim 27; Page 4; 98pp; English.
XX
CC The present sequence represents a human Zven2 polypeptide. The
CC specification also describes Zven1. The Zven1 gene is present on
CC chromosome 3p21.1-3p14.3. The specification also describes Zven2. Zven
CC polynucleotides and polypeptides are useful in veterinary and human
CC therapeutics, for treating small cell cancer of the lung, to promote
CC wound healing, to prevent or to treat an adverse reaction of the skin to
CC a skin-sensitizing agent or a skin-irritating agent, to stimulate the
CC immune system of an immunocompromised individual, as antitumour agents,
CC as antiinflammatory agents, as agents to regulate regeneration or

```
CC   remodeling of tissue, as agents to modulate necrosis or tissue growth
CC   developmental arrest, to inhibit proliferation of tumour cells, cellular
CC   differentiation and necrosis, to treat disorders associated with
CC   gastrointestinal cell contractility, secretion of digestive enzymes and
CC   acids, gastrointestinal motility, recruitment of digestive enzymes,
CC   inflammation, and conditions associated with hypermotility such as
CC   diarrhoea and Crohn's disease
XX
SQ   Sequence 105 AA;

  Query Match             100.0%;  Score 498;  DB 4;  Length 105;
  Best Local Similarity   100.0%;  Pred. No. 9.1e-47;
  Matches   86;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 AVITGACERDVQCGAGTCCAISLWLRGLRMCTPLGREGEECHPGSHKVPFFRKRKHHTCP 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         20 AVITGACERDVQCGAGTCCAISLWLRGLRMCTPLGREGEECHPGSHKVPFFRKRKHHTCP 79

Qy         61 CLPNLLCSRFPDGRYRCSMDLKNINF 86
              ||||||||||||||||||||||||||
Db         80 CLPNLLCSRFPDGRYRCSMDLKNINF 105


RESULT 17
AAU12406
ID   AAU12406 standard; protein; 105 AA.
XX
AC   AAU12406;
XX
DT   24-OCT-2001  (first entry)
XX
DE   Human PRO1186 polypeptide sequence.
XX
KW   Human secretory and transmembrane; PRO; mammalian; cancer; lung; breast;
KW   prostate; cervical; tumour necrosis factor-alpha; TNF-alpha; cartilage;
KW   ear; proliferation; glucose; free fatty acid; skeletal muscle; adipocyte;
KW   A-peptide; factor VIIA; gene therapy.
XX
OS   Homo sapiens.
XX
PN   WO200140466-A2.
XX
PD   07-JUN-2001.
XX
PF   01-DEC-2000; 2000WO-US032678.
XX
PR   01-DEC-1999;   99WO-US028301.
PR   01-DEC-1999;   99WO-US028634.
PR   02-DEC-1999;   99WO-US028551.
PR   02-DEC-1999;   99WO-US028564.
PR   02-DEC-1999;   99WO-US028565.
PR   09-DEC-1999;   99US-0170262P.
PR   16-DEC-1999;   99WO-US030095.
PR   20-DEC-1999;   99WO-US030911.
PR   20-DEC-1999;   99WO-US030999.
PR   30-DEC-1999;   99WO-US031243.
PR   30-DEC-1999;   99WO-US031274.
PR   05-JAN-2000; 2000WO-US000219.
PR   06-JAN-2000; 2000WO-US000277.
PR   06-JAN-2000; 2000WO-US000376.
PR   11-FEB-2000; 2000WO-US003565.
PR   18-FEB-2000; 2000WO-US004341.
PR   18-FEB-2000; 2000WO-US004342.
PR   22-FEB-2000; 2000WO-US004414.
PR   24-FEB-2000; 2000WO-US004914.
PR   24-FEB-2000; 2000WO-US005004.
PR   01-MAR-2000; 2000WO-US005601.
PR   02-MAR-2000; 2000WO-US005841.
PR   03-MAR-2000; 2000US-0187202P.
PR   10-MAR-2000; 2000WO-US006319.
PR   15-MAR-2000; 2000WO-US006884.
PR   20-MAR-2000; 2000WO-US007377.
PR   21-MAR-2000; 2000WO-US007532.
PR   30-MAR-2000; 2000WO-US008439.
PR   17-MAY-2000; 2000WO-US013705.
PR   22-MAY-2000; 2000WO-US014042.
PR   30-MAY-2000; 2000WO-US014941.
PR   02-JUN-2000; 2000WO-US015264.
PR   05-JUN-2000; 2000US-0209832P.
PR   28-JUL-2000; 2000WO-US020710.
PR   11-AUG-2000; 2000WO-US022031.
PR   23-AUG-2000; 2000WO-US023522.
PR   24-AUG-2000; 2000WO-US023328.
PR   08-NOV-2000; 2000WO-US030952.
PR   10-NOV-2000; 2000WO-US030873.
XX
PA   (GETH ) GENENTECH INC.
XX
PI   Baker KP,  Beresini M,  Deforge L,  Desnoyers L,  Filvaroff E,  Gao W;
PI   Gerritsen ME,  Goddard A,  Godowski PJ,  Gurney AL,  Sherwood S;
PI   Smith V,  Stewart TA,  Tumas D,  Watanabe CK,  Wood WI,  Zhang Z;
XX
DR   WPI; 2001-408281/43.
DR   N-PSDB; AAS21478.
XX
PT   Isolated , secretory and transmembrane PRO polypeptide used to detect
PT   other PRO polypeptides, link bioactive molecules to cells expressing PRO
PT   polypeptides, and detect the presence of mammalian tumors e.g. lung,
PT   breast, prostate, cervical.
XX
PS   Claim 12; Fig 470; 813pp; English.
XX
CC   AAU12172-AAU12446 represent novel human secretory and transmembrane PRO
CC   polypeptides. The PRO polypeptides are useful to detect other PRO
CC   polypeptides, to link bioactive molecules to cells expressing PRO
CC   polypeptides, to modulate biological activities of cells expressing PRO
CC   polypeptides, and to detect the presence of mammalian lung, colon,
CC   breast, prostate, rectal, cervical or liver tumours by comparing PRO
CC   polypeptide expression in a cell sample to that in a control sample. Some
CC   of the 275 sequences are also useful to stimulate the release of tumour
CC   necrosis factor-alpha (TNF-alpha) from human blood, the proliferation or
CC   differentiation of chondrocytes, the proliferation or gene expression in
CC   pericyte cells, the release of proteoglycans from cartilage, the
CC   proliferation of inner ear utricular supporting cells or of T-
CC   lymphocytes, the release of a cytokine from peripheral blood monocytes
CC   (PBMCs), or the proliferation of endothelial cells. Some of the PRO
CC   polypeptides may modulate glucose or free fatty acid uptake by skeletal
CC   muscle cells or by adipocytes; or inhibit binding of A-peptide to factor
CC   VIIA. The PRO polypeptides can be used in assays to identify molecules
CC   involved in binding interactions. The polynucleotides encoding PRO
CC   polypeptides can be used to generate probes, antisense RNA/DNA,
CC   transgenic or knock out animals and can be used in gene therapy
XX
SQ   Sequence 105 AA;

  Query Match             100.0%;  Score 498;  DB 4;  Length 105;
  Best Local Similarity   100.0%;  Pred. No. 9.1e-47;
  Matches   86;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 AVITGACERDVQCGAGTCCAISLWLRGLRMCTPLGREGEECHPGSHKVPFFRKRKHHTCP 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         20 AVITGACERDVQCGAGTCCAISLWLRGLRMCTPLGREGEECHPGSHKVPFFRKRKHHTCP 79

Qy         61 CLPNLLCSRFPDGRYRCSMDLKNINF 86
              ||||||||||||||||||||||||||
Db         80 CLPNLLCSRFPDGRYRCSMDLKNINF 105


RESULT 18
AAB53096
ID   AAB53096 standard; protein; 105 AA.
XX
AC   AAB53096;
XX
DT   28-FEB-2001  (first entry)
XX
```

DE Human angiogenesis-associated protein PRO1186, SEQ ID NO:165.
XX
KW Human; angiogenesis-associated protein; PRO; endothelial cell growth;
KW cardiac hypertrophy; cardiovascular disorder; endothelial disorder;
KW angiogenic disorder; atherosclerosis; osteoporosis; hypertension;
KW myocardial infarction; diabetic retinopathy; rheumatoid arthritis;
KW Crohn's disease; psoriasis; endometriosis; ulcer; wound healing; cancer;
KW Alzheimer's disease; Huntington's disease; stroke; drug screening;
KW gene therapy; transgenic animal.
XX
OS Homo sapiens.
XX
PN WO200053753-A2.
XX
PD 14-SEP-2000.
XX
PF 05-JAN-2000; 2000WO-US000219.
XX
PR 08-MAR-1999; 99WO-US005028.
PR 12-MAR-1999; 99US-0123957P.
PR 14-MAY-1999; 99US-0134287P.
PR 02-JUN-1999; 99WO-US012252.
PR 23-JUN-1999; 99US-0141037P.
PR 20-JUL-1999; 99US-0144758P.
PR 26-JUL-1999; 99US-0145698P.
PR 01-SEP-1999; 99WO-US020111.
PR 08-SEP-1999; 99WO-US020594.
PR 15-SEP-1999; 99WO-US021090.
PR 15-SEP-1999; 99WO-US021547.
PR 05-OCT-1999; 99WO-US023089.
PR 30-NOV-1999; 99WO-US028313.
PR 30-NOV-1999; 99WO-US028409.
PR 02-DEC-1999; 99WO-US028564.
PR 02-DEC-1999; 99WO-US028565.
XX
PA (GETH) GENENTECH INC.
XX
PI Ashkenazi AJ, Baker KP, Ferrara N, Gerber H, Goddard A;
PI Godowski PJ, Gurney AL, Hillan KJ, Kuo SS, Mark MR, Marsters SA;
PI Paoni NF, Pitti RM, Watanabe CK, Williams PM, Wood WI;
XX
DR WPI; 2001-090793/10.
DR N-PSDB; AAC97496.
XX
PT New isolated nucleic acid for producing a PRO polypeptide, analyzing
PT genetic disorders and treating cardiovascular, endothelial or angiogenic
PT disorders, such as atherosclerosis, wounds or cancer.
XX
PS Claim 69; Fig 66; 293pp; English.
XX
CC The invention relates to novel human angiogenesis-associated proteins
CC designated PRO proteins (AAB53064-B53097), and to nucleic acids encoding
CC PRO proteins. The invention also relates to vectors and host cells
CC comprising a PRO nucleic acid, the recombinant production of a PRO
CC protein, PRO antibodies specific for a PRO protein, fusion proteins
CC comprising a PRO protein, agonists or antagonists of a PRO protein, and
CC compounds which inhibit the expression of a PRO gene. The invention
CC additionally encompasses methods of identifying modulators of PRO
CC expression or activity; diagnosing a cardiovascular, endothelial or
CC angiogenic disorder, or a susceptibility to such a disorder by detecting
CC mutations in a PRO gene, or the expression level of a PRO gene within a
CC particular tissue; treating a cardiovascular, endothelial or angiogenic
CC disorder via the administration of a PRO protein, PRO nucleic acid, or
CC PRO agonist or antagonist; a retroviral gene therapy vector comprising a
CC PRO nucleic acid; and methods of inhibiting or stimulating endothelial
CC cell growth, cardiac hypertrophy or PRO-induced angiogenesis via the
CC administration of a PRO protein, or an agonist or antagonist thereof. PRO
CC nucleic acids, PRO proteins, antibodies against PRO proteins, PRO
CC agonists and PRO antagonists may be used as therapeutic agents to treat
CC cardiovascular, endothelial or angiogenic disorders, such as
CC atherosclerosis, osteoporosis, myocardial infarction, hypertension,
CC diabetic retinopathy, rheumatoid arthritis, Crohn's disease, psoriasis,
CC endometriosis, ulcers, wounds, cancer, Alzheimer's disease, Huntington's
CC disease, or stroke. PRO nucleic acids are additionally useful in the
CC recombinant production of PRO proteins, as hybridisation probes to screen
CC libraries to isolate cDNAs with sequence identity to PRO proteins, to map
CC genes encoding PRO proteins, to analyse genetic disorders, and in gene
CC therapy. PRO nucleic acids can also be used to produce transgenic animals
CC useful for the development and screening of potential therapeutic agents.
CC The present sequence represents a PRO protein of the invention
XX
SQ Sequence 105 AA;

Query Match 100.0%; Score 498; DB 4; Length 105;
Best Local Similarity 100.0%; Pred. No. 9.1e-47;
Matches 86; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 AVITGACERDVQCGAGTCCAISLWLRGLRMCTPLGREGEECHPGSHKVPFFRKRKHHTCP 60
Db 20 AVITGACERDVQCGAGTCCAISLWLRGLRMCTPLGREGEECHPGSHKVPFFRKRKHHTCP 79

Qy 61 CLPNLLCSRFPDGRYRCSMDLKNINF 86
Db 80 CLPNLLCSRFPDGRYRCSMDLKNINF 105

RESULT 19
AAB65268
ID AAB65268 standard; protein; 105 AA.
XX
AC AAB65268;
XX
DT 02-APR-2001 (first entry)
XX
DE Human PRO1186 (UNQ600) protein sequence SEQ ID NO:371.
XX
KW Human; secreted and transmembrane protein; PRO; cytostatic; cell death;
KW cancer; chromosomal mapping; gene mapping; tissue typing;
KW diagnostic assay.
XX
OS Homo sapiens.
XX
PN WO200073454-A1.
XX
PD 07-DEC-2000.
XX
PF 30-MAR-2000; 2000WO-US008439.
XX
PR 02-JUN-1999; 99WO-US012252.
PR 23-JUN-1999; 99US-0141037P.
PR 07-JUL-1999; 99US-0143048P.
PR 20-JUL-1999; 99US-0144758P.
PR 26-JUL-1999; 99US-0145698P.
PR 28-JUL-1999; 99US-0146222P.
PR 17-AUG-1999; 99US-0149396P.
PR 15-SEP-1999; 99WO-US021090.
PR 15-SEP-1999; 99WO-US021547.
PR 08-OCT-1999; 99US-0158663P.
PR 30-NOV-1999; 99WO-US028313.
PR 01-DEC-1999; 99WO-US028301.
PR 16-DEC-1999; 99WO-US030095.
PR 20-DEC-1999; 99WO-US030911.
PR 05-JAN-2000; 2000WO-US000219.
PR 06-JAN-2000; 2000WO-US000376.
PR 11-FEB-2000; 2000WO-US003565.
PR 18-FEB-2000; 2000WO-US004341.
PR 22-FEB-2000; 2000WO-US004414.
PR 24-FEB-2000; 2000WO-US004914.
PR 24-FEB-2000; 2000WO-US005004.
PR 02-MAR-2000; 2000WO-US005841.
PR 15-MAR-2000; 2000WO-US006884.
PR 20-MAR-2000; 2000WO-US007377.
XX
PA (GETH) GENENTECH INC.
XX
PI Ashkenazi AJ, Baker KP, Botstein D, Desnoyers L, Eaton DL;

PI Ferrara N, Fong S, Gerber H, Gerritsen ME, Goddard A, Godowski PJ;
PI Grimaldi CJ, Gurney AL, Kljavin IJ, Napier MA, Pan J, Paoni NF;
PI Roy MA, Stewart TA, Tumas D, Watanabe CK, Williams PM, Wood WI;
PI Zhang Z;
XX
DR WPI; 2001-032160/04.
DR N-PSDB; AAF44237.
XX
PT PRO polynucleotides used to produce polypeptides used to target bioactive
PT molecules such as toxins, radiolabels or antibodies, to specific cells,
PT to cause targeted cell death.
XX
PS Claim 12; Fig 266; 935pp; English.
XX
CC The present invention describes human secreted and transmembrane PRO
CC proteins. The PRO proteins have cytostatic activity. The PRO proteins can
CC be used for targeted delivery of bioactive molecules, such as toxins,
CC radiolabels or antibodies, that cause cell death. PRO nucleotide
CC sequences, and their fragments, can be used as hybridisation probes, in
CC chromosomal and gene mapping, and in the generation of anti-sense RNA and
CC DNA. They may also be used to produce transgenic animals which are used
CC to develop and screen therapeutically useful reagents. The PRO nucleotide
CC and protein sequence can be used for tissue typing and in treating
CC cancer. Anti-PRO antibodies can be used in diagnostic assays. AAF44270 to
CC AAF44470 represent PCR primers and hybridisation probes used in the
CC isolation of human PRO sequences. AAF44087 to AAF44269 and AAB65154 to
CC AAB65300 represent human PRO polynucleotide and protein sequences given
CC in the exemplification of the present invention
XX
SQ Sequence 105 AA;

Query Match 100.0%; Score 498; DB 4; Length 105;
Best Local Similarity 100.0%; Pred. No. 9.1e-47;
Matches 86; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 AVITGACERDVQCGAGTCCAISLWLRGLRMCTPLGREGEECHPGSHKVPFFRKRKHHTCP 60
Db 20 AVITGACERDVQCGAGTCCAISLWLRGLRMCTPLGREGEECHPGSHKVPFFRKRKHHTCP 79

Qy 61 CLPNLLCSRFPDGRYRCSMDLKNINF 86
Db 80 CLPNLLCSRFPDGRYRCSMDLKNINF 105

RESULT 20
AAB48175
ID AAB48175 standard; protein; 105 AA.
XX
AC AAB48175;
XX
DT 02-APR-2001 (first entry)
XX
DE Human PRO1186 polypeptide.
XX
KW PRO1186; PRO184; neoplastic; cell growth; tumour; cancer; breast;
KW ovarian; renal; colorectal; uterine; prostate; lung; melanoma;
KW central nervous system; leukemia; antitumor; cytostatic.
XX
OS Homo sapiens.
XX
FH Key Location/Qualifiers
FT Peptide 1. .19
FT /note= "signal sequence"
FT Protein 20. .105
FT /note= "mature protein"
FT Modified-site 33. .39
FT /note= "N-myristoylation site"
FT Modified-site 35. .41
FT /note= "N-myristoylation site"
FT Modified-site 46. .52
FT /note= "N-myristoylation site"
FT Modified-site 88. .95
FT /note= "tyrosine kinase phosphorylation site"
XX
PN WO200075327-A1.
XX
PD 14-DEC-2000.
XX
PF 24-FEB-2000; 2000WO-US004914.
XX
PR 02-JUN-1999; 99WO-US012252.
PR 26-JUL-1999; 99US-0145698P.
PR 05-JAN-2000; 2000WO-US000219.
XX
PA (GETH) GENENTECH INC.
XX
PI Ashkenazi AJ, Hillan KJ, Napier MA, Watanabe CK, Wood WI;
XX
DR WPI; 2001-071078/08.
DR N-PSDB; AAC84469.
XX
PT Compositions for inhibiting neoplastic cell growth and treating tumor, a
PT cancer, comprises novel PRO1186 or PRO184 polypeptides or its agonist.
XX
PS Claim 31; Fig 2; 104pp; English.
XX
CC The invention provides PRO1186 and PRO184 polypetides that can be used
CC for the inhibition of neoplastic cell growth and for treating tumours.
CC The PRO polypeptides can be expressed by standard recombinant
CC methodology. The PRO polypeptides or their agonists are useful for
CC inhibition of neoplastic cell growth and for treating tumours, cancers
CC such as breast, ovarian, renal, colorectal, uterine, prostate, lung,
CC bladder or central nervous system cancers or melanoma and leukemia. The
CC present sequence represents the human PRO1186 polypeptide (encoding cDNA
CC clone ID: DNA60621-1516)
XX
SQ Sequence 105 AA;

Query Match 100.0%; Score 498; DB 4; Length 105;
Best Local Similarity 100.0%; Pred. No. 9.1e-47;
Matches 86; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 AVITGACERDVQCGAGTCCAISLWLRGLRMCTPLGREGEECHPGSHKVPFFRKRKHHTCP 60
Db 20 AVITGACERDVQCGAGTCCAISLWLRGLRMCTPLGREGEECHPGSHKVPFFRKRKHHTCP 79

Qy 61 CLPNLLCSRFPDGRYRCSMDLKNINF 86
Db 80 CLPNLLCSRFPDGRYRCSMDLKNINF 105

RESULT 21
AAB48067
ID AAB48067 standard; protein; 105 AA.
XX
AC AAB48067;
XX
DT 19-MAR-2001 (first entry)
XX
DE Human extracellular signaling molecule (EXCS) (ID 2006548CD1).
XX
KW Extracellular signaling molecule; EXCS; anti-inflammatory; human;
KW immunosuppressive; cytostatic; neuroprotective; gastrointestinal;
KW virucide; antibacterial; anti-HIV; human immunodeficiency virus;
KW antiinfertility; cerebroprotective; nootropic; antiulcer; antifungal;
KW anticonvulsant; tranquilizer; neuroleptic; vasotropic; gynecological;
KW keratolytic; protozoacide; gene therapy.
XX
OS Homo sapiens.
XX
PN WO200070049-A2.
XX
PD 23-NOV-2000.
XX
PF 19-MAY-2000; 2000WO-US013975.
XX

PR 19-MAY-1999; 99US-0134949P.
PR 15-JUL-1999; 99US-0144270P.
PR 30-JUL-1999; 99US-0146700P.
PR 04-OCT-1999; 99US-0157508P.
XX
PA (INCY-) INCYTE GENOMICS INC.
XX
PI Tang YT, Yue H, Lal P, Burford N, Bandman O, Baughn MR;
PI Azimzai Y, Lu DAM, Patterson C;
XX
DR WPI; 2001-025021/03.
DR N-PSDB; AAC84303.
XX
PT New human extracellular signaling nucleic acids and polypeptides useful
PT for diagnosing, treating and preventing infections and gastrointestinal,
PT neurological, reproductive, and autoimmune/inflammatory disorders.
XX
PS Claim 1; Page 89; 114pp; English.
XX
CC The invention provides human extracellular signaling molecules (EXCS) and
CC polynucleotides which identify and encode EXCS. EXCS can be expressed by
CC standard recombinant methodology. The amino acid and nucleic acid
CC sequences of EXCS are useful for diagnosing, treating and preventing
CC infections and gastrointestinal (peptic ulcer, dysphagia, pancreatitis),
CC neurological (e.g. epilepsy, ischemic cerebrovascular disease, stroke),
CC reproductive (infertility, ovulatory defects, endometriosis), autoimmune
CC /inflammatory (actinic keratosis, acquired immunodeficiency syndrome
CC (AIDS), Addison's disease), and cell proliferative disorders including
CC cancers (of the breast, adrenal gland, bone). They may also be used to
CC treat fatal familial insomnia, nutritional and metabolic diseases of the
CC nervous system, myopathies, mental disorders (anxiety, schizophrenia,
CC mood), as well as infections caused by parasites (malaria, leishmania,
CC trypanosoma), viral (adenovirus, coronavirus, flavivirus), bacterial
CC (e.g. pneumococcus, staphylococcus, bacillus), and fungal (aspergillus,
CC blastomyces, dermatophytes) agents. The nucleic acids, polypeptides,
CC antagonists, agonists, pharmaceutical compositions, and antibodies may
CC also be used for treating or preventing disorders associated with
CC increased or decreased expression or activity of EXCS. EXCS
CC polynucleotides may also be used to detect and quantify gene expression
CC in biopsied tissues in which expression of EXCS may be correlated with
CC the disease, to determine presence or excess expression of EXCS, to
CC monitor regulation of EXCS levels during therapeutic intervention, to
CC detect the presence of associated disorders, as targets in microarray, to
CC generate hybridization probes, and to detect differences in gene
CC sequences among normal, carrier or affected individuals. Antibodies may
CC also be used in diagnosing disorders, in monitoring patients being
CC treated with EXCS agonists, antagonists or inhibitors. Sequences AAB48057
CC -B48082 represent the EXCS of the invention
XX
SQ Sequence 105 AA;

Query Match 100.0%; Score 498; DB 4; Length 105;
Best Local Similarity 100.0%; Pred. No. 9.1e-47;
Matches 86; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

```
Qy          1 AVITGACERDVQCGAGTCCAISLWLRGLRMCTPLGREGEECHPGSHKVPFFRKRKHHTCP 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         20 AVITGACERDVQCGAGTCCAISLWLRGLRMCTPLGREGEECHPGSHKVPFFRKRKHHTCP 79

Qy         61 CLPNLLCSRFPDGRYRCSMDLKNINF 86
              ||||||||||||||||||||||||||
Db         80 CLPNLLCSRFPDGRYRCSMDLKNINF 105
```

RESULT 22
AAM50773
ID AAM50773 standard; protein; 105 AA.
XX
AC AAM50773;
XX
DT 23-APR-2002 (first entry)
XX
DE Endocrine gland-derived vascular endothelial growth factor.
XX
KW Endocrine gland-derived vascular endothelial growth factor; EG-VEGF;
KW human; cell proliferation; cell migration; fenestration;
KW cell differentiation; angiogenesis; chemotaxis; endocrine; infertility;
KW fertility; polycystic ovary syndrome; ovarian cyst; cancer; cytostatic;
KW diagnosis; therapy.
XX
OS Homo sapiens.
XX

FH	Key	Location/Qualifiers
FT	Peptide	1. .19
FT		/label= Signal_peptide
FT	Protein	20. .105
FT		/label= Mature_protein
FT	Modified-site	33
FT		/note= "N-myristoylated"
FT	Modified-site	35
FT		/note= "N-myristoylated"
FT	Modified-site	46
FT		/note= "N-myristoylated"

XX
PN WO200200711-A2.
XX
PD 03-JAN-2002.
XX
PF 22-JUN-2001; 2001WO-US020116.
XX
PR 23-JUN-2000; 2000US-0213637P.
PR 07-SEP-2000; 2000US-0230978P.
PR 01-DEC-2000; 2000WO-US032678.
XX
PA (GETH) GENENTECH INC.
XX
PI Ferrara N, Watanabe C, Wood WI;
XX
DR WPI; 2002-130882/17.
DR N-PSDB; ABA91567.
XX
PT New endocrine gland-vascular endothelial growth factor (EG-VEGF)
PT polypeptides, agonists and antagonists, useful for regulating fertility,
PT and for treating cancer of the reproductive organs, e.g. ovarian or
PT prostate cancer.
XX
PS Claim 12; Fig 2; 133pp; English.
XX
CC The present sequence is that of a novel, tissue-restricted, growth and
CC differentiation factor termed endocrine gland-derived vascular
CC endothelial growth factor (EG-VEGF). The sequence is predicted from the
CC open reading frame of a cDNA clone (see ABA91567) obtained from an
CC ovarian tissue library. EG-VEGF induces proliferation, migration and
CC fenestrations in capillary endothelial cells derived from endocrine
CC glands, but has no effect on a variety of other endothelial and non-
CC endothelial cell types tested. The EG-VEGF precursor has a predicted
CC mol.wt. of 11715 and a pI of 9.05. The mature protein (mol.wt. 8600) is
CC cysteine-rich and is predicted to consist of a series of short beta
CC strands with large connecting loops held together by disulfide bonds
CC resulting in a flat fold with finger-like projections that act as
CC interactive surfaces. 80% Homology and 63% identity is shown to venom
CC protein A (VPRA) of the black mamba snake, and 76% homology and 58%
CC identity to human protein Bv8. EG-VEGF nucleic acids and polypeptides, as
CC well as agonists and antagonists, can be used in the treatment of
CC conditions associated with hormone-producing tissue, especially ovarian,
CC testicular, cervical, adrenal, placental or prostate tissue. The
CC condition may be polycystic ovary syndrome, cancer, especially ovarian
CC cancer, testicular cancer, prostate cancer or uterine cancer, or ovarian
CC cyst (all claimed). Fertility can be regulated using an EG-VEGF
CC antagonist to inhibit follicle maturation or ovulation. Methods are
CC claimed for identifying compounds that modulate EG-VEGF activity,
CC especially the ability to induce phosphorylation of a kinase involved in
CC cell proliferation or survival, to induce chemotaxis, angiogenesis, or
CC cell differentiation, or to induce endothelial cell proliferation
XX
SQ Sequence 105 AA;

```
  Query Match             100.0%;  Score 498;  DB 5;  Length 105;
  Best Local Similarity   100.0%;  Pred. No. 9.1e-47;
  Matches   86;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 AVITGACERDVQCGAGTCCAISLWLRGLRMCTPLGREGEECHPGSHKVPFFRKRKHHTCP 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         20 AVITGACERDVQCGAGTCCAISLWLRGLRMCTPLGREGEECHPGSHKVPFFRKRKHHTCP 79

Qy         61 CLPNLLCSRFPDGRYRCSMDLKNINF 86
              |||||||||||||||||||||||||
Db         80 CLPNLLCSRFPDGRYRCSMDLKNINF 105


RESULT 23
AAU83674
ID   AAU83674 standard; protein; 105 AA.
XX
AC   AAU83674;
XX
DT   08-MAY-2002  (first entry)
XX
DE   Human PRO protein, Seq ID No 166.
XX
KW   Human; secreted protein; PRO; tumour; lung cancer; colon cancer;
KW   breast cancer; prostate tumour; rectal tumour; liver tumour;
KW   pericyte cell proliferation; chondrocyte cell proliferation;
KW   tumour necrosis factor-alpha.
XX
OS   Homo sapiens.
XX
PN   WO200208288-A2.
XX
PD   31-JAN-2002.
XX
PF   29-JUN-2001; 2001WO-US021066.
XX
PR   20-JUL-2000; 2000US-0219556P.
PR   25-JUL-2000; 2000US-0220585P.
PR   25-JUL-2000; 2000US-0220605P.
PR   25-JUL-2000; 2000US-0220607P.
PR   25-JUL-2000; 2000US-0220624P.
PR   25-JUL-2000; 2000US-0220638P.
PR   25-JUL-2000; 2000US-0220664P.
PR   25-JUL-2000; 2000US-0220666P.
PR   26-JUL-2000; 2000US-0220893P.
PR   28-JUL-2000; 2000WO-US020710.
PR   01-AUG-2000; 2000US-0222425P.
PR   22-AUG-2000; 2000US-0227133P.
PR   23-AUG-2000; 2000WO-US023522.
PR   24-AUG-2000; 2000WO-US023328.
PR   10-NOV-2000; 2000WO-US030873.
PR   28-NOV-2000; 2000US-0253646P.
PR   01-DEC-2000; 2000WO-US032678.
PR   20-DEC-2000; 2000US-00747259.
PR   20-DEC-2000; 2000WO-US034956.
PR   28-FEB-2001; 2001WO-US006520.
PR   01-MAR-2001; 2001WO-US006666.
PR   22-MAR-2001; 2001US-00816744.
PR   10-MAY-2001; 2001US-00854208.
PR   10-MAY-2001; 2001US-00854280.
PR   25-MAY-2001; 2001WO-US017092.
XX
PA   (GETH ) GENENTECH INC.
XX
PI   Baker KP,  Desnoyers L,  Gerritsen ME,  Goddard A,  Godowski PJ;
PI   Grimaldi JC,  Gurney AL,  Smith V,  Stephan JF,  Watanabe CK,  Wood WI;
XX
DR   WPI; 2002-172001/22.
DR   N-PSDB; ABK33618.
XX
PT   One hundred and twenty two nucleic acids encoding PRO polypeptides,
PT   useful for treating a PRO related disorder and for diagnosing tumors such
PT   as lung cancer, colon cancer, breast tumor, prostate tumor, rectal tumor
PT   or liver tumor.
XX
PS   Claim 11; Fig 166; 359pp; English.
XX
CC   The invention relates to one hundred and twenty two nucleic acids
CC   encoding PRO polypeptides. The sequences of the 122 PRO polynucleotides
CC   encode human secreted proteins. The PRO nucleic acids, polypeptides,
CC   agonists and antagonists are useful for treating a PRO related disorder.
CC   The PRO polypeptides are useful for diagnosing tumours, especially lung
CC   cancer, colon cancer, breast tumour, prostate tumour, rectal tumour or
CC   liver tumour. The PRO polypeptides are useful for stimulating the
CC   proliferation of, or gene expression, in pericyte cells, for stimulating
CC   the proliferation or differentiation of chondrocyte cells, for
CC   stimulating the release of tumour necrosis factor-alpha from human blood,
CC   for stimulating or inhibiting the proliferation of normal human dermal
CC   fibroblast cells. The PRO polypeptide may also be used as molecular
CC   weight markers and for tissue typing. The PRO nucleic acids have
CC   applications in molecular biology, including use as hybridisation probes,
CC   and in chromosome and gene mapping. AAU83592-AAU83713 represent human PRO
CC   protein sequences of the invention
XX
SQ   Sequence 105 AA;

  Query Match             100.0%;  Score 498;  DB 5;  Length 105;
  Best Local Similarity   100.0%;  Pred. No. 9.1e-47;
  Matches   86;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 AVITGACERDVQCGAGTCCAISLWLRGLRMCTPLGREGEECHPGSHKVPFFRKRKHHTCP 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         20 AVITGACERDVQCGAGTCCAISLWLRGLRMCTPLGREGEECHPGSHKVPFFRKRKHHTCP 79

Qy         61 CLPNLLCSRFPDGRYRCSMDLKNINF 86
              |||||||||||||||||||||||||
Db         80 CLPNLLCSRFPDGRYRCSMDLKNINF 105


RESULT 24
ABB84902
ID   ABB84902 standard; protein; 105 AA.
XX
AC   ABB84902;
XX
DT   16-MAY-2002  (first entry)
XX
DE   Human PRO1186 protein sequence SEQ ID NO:172.
XX
KW   Human; angiogenesis; cardiant; cytostatic; antiangiogenic; hypotensive;
KW   vulnerary; antiarteriosclerotic; PRO agonist; PRO antagonist; trauma;
KW   gene therapy; cardiovascular disorder; endothelial disorder; cancer;
KW   angiogenic disorder; cardiac hypertrophy; atherosclerosis; hypertension;
KW   age-related macular degeneration; arterial restenosis; angina;
KW   rheumatoid arthritis; myocardial infarction; thrombophlebitis;
KW   lymphangitis; tumour angiogenesis; breast carcinoma; liver carcinoma;
KW   wound healing; chromosome mapping; gene mapping.
XX
OS   Homo sapiens.
XX
PN   WO200200690-A2.
XX
PD   03-JAN-2002.
XX
PF   20-JUN-2001; 2001WO-US019692.
XX
PR   23-JUN-2000; 2000US-0213637P.
PR   20-JUL-2000; 2000US-0219556P.
PR   25-JUL-2000; 2000US-0220624P.
PR   25-JUL-2000; 2000US-0220664P.
PR   28-JUL-2000; 2000WO-US020710.
PR   02-AUG-2000; 2000US-0222695P.
PR   17-AUG-2000; 2000US-00643657.
PR   23-AUG-2000; 2000WO-US023522.
PR   24-AUG-2000; 2000WO-US023328.
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PR   07-SEP-2000; 2000US-0230978P.
PR   18-SEP-2000; 2000US-00664610.
PR   18-SEP-2000; 2000US-00665350.
PR   24-OCT-2000; 2000US-0242922P.
PR   08-NOV-2000; 2000US-00709238.
PR   08-NOV-2000; 2000WO-US030952.
PR   10-NOV-2000; 2000WO-US030873.
PR   01-DEC-2000; 2000WO-US032678.
PR   20-DEC-2000; 2000US-00747259.
PR   20-DEC-2000; 2000WO-US034956.
PR   22-JAN-2001; 2001US-00767609.
PR   28-FEB-2001; 2001US-00796498.
PR   28-FEB-2001; 2001WO-US006520.
PR   01-MAR-2001; 2001WO-US006666.
PR   09-MAR-2001; 2001US-00802706.
PR   14-MAR-2001; 2001US-00808689.
PR   22-MAR-2001; 2001US-00816744.
PR   05-APR-2001; 2001US-00828366.
PR   10-MAY-2001; 2001US-00854208.
PR   10-MAY-2001; 2001US-00854280.
PR   25-MAY-2001; 2001US-00866028.
PR   25-MAY-2001; 2001US-00866034.
PR   25-MAY-2001; 2001WO-US017092.
PR   30-MAY-2001; 2001US-00870574.
PR   30-MAY-2001; 2001WO-US017443.
PR   01-JUN-2001; 2001WO-US017800.
XX
PA   (GETH ) GENENTECH INC.
XX
PI   Baker KP,  Ferrara N,  Gerber H,  Gerritsen ME,  Goddard A;
PI   Godowski PJ,  Gurney AL,  Hillan KJ,  Marsters SA,  Pan J,  Paoni NF;
PI   Stephan JF,  Watanabe CK,  Williams PM,  Wood WI,  Ye W;
XX
DR   WPI; 2002-090516/12.
DR   N-PSDB; ABL88157.
XX
PT   One hundred and eighty seven nucleic acids encoding PRO polypeptides,
PT   useful in diagnosis and treatment of cardiovascular (e.g. myocardial
PT   infarction), endothelial or angiogenic disorders in a mammal.
XX
PS   Claim 11; Fig 172; 565pp; English.
XX
CC   ABL88072 to ABL88258 encode the PRO proteins given in ABB84817 to
CC   ABB85003. The PRO proteins and polynucleotides have cardiant, cytostatic,
CC   antiangiogenic, hypotensive, vulnerary and antiarteriosclerotic
CC   activities, and can be used in gene therapy. The PRO polynucleotides,
CC   proteins, agonists and antagonists are useful for treating or diagnosing
CC   a cardiovascular, endothelial or angiogenic disorder in a mammal, e.g.
CC   cardiac hypertrophy, trauma, cancer, age-related macular degeneration,
CC   atherosclerosis, hypertension, arterial restenosis, rheumatoid arthritis,
CC   angina, myocardial infarctions, thrombophlebitis, lymphangitis, tumour
CC   angiogenesis (such as breast carcinoma and liver carcinoma) and wound
CC   healing. The PRO polynucleotides have applications in molecular biology,
CC   including use as hybridisation probes, and in chromosome and gene
CC   mapping. ABL88259 to ABL88267 represent primers and probes used in the
CC   exemplification of the present invention
XX
SQ   Sequence 105 AA;

  Query Match             100.0%;  Score 498;  DB 5;  Length 105;
  Best Local Similarity   100.0%;  Pred. No. 9.1e-47;
  Matches   86;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 AVITGACERDVQCGAGTCCAISLWLRGLRMCTPLGREGEECHPGSHKVPFFRKRKHHTCP 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         20 AVITGACERDVQCGAGTCCAISLWLRGLRMCTPLGREGEECHPGSHKVPFFRKRKHHTCP 79

Qy         61 CLPNLLCSRFPDGRYRCSMDLKNINF 86
              ||||||||||||||||||||||||||
Db         80 CLPNLLCSRFPDGRYRCSMDLKNINF 105


RESULT 25
AAO15527
ID   AAO15527 standard; protein; 105 AA.
XX
AC   AAO15527;
XX
DT   24-OCT-2002  (first entry)
XX
DE   Human physiologically-active ZAQ ligand-related protein 3.
XX
KW   Human; ZAQ ligand; physiologically-active ZAQ ligand; digestive disease;
KW   colitis; diarrhoea.
XX
OS   Homo sapiens.
XX
PN   WO200257443-A1.
XX
PD   25-JUL-2002.
XX
PF   21-JAN-2002; 2002WO-JP000378.
XX
PR   22-JAN-2001; 2001JP-00013027.
PR   17-MAY-2001; 2001JP-00147759.
XX
PA   (TAKE ) TAKEDA CHEM IND LTD.
XX
PI   Yamada T,  Suenaga M,  Nishimura O;
XX
DR   WPI; 2002-566801/60.
XX
PT   Industrial production of physiologically-active ZAQ ligand by expressing
PT   in transformant prokaryote and refolding in redox buffer, for use in
PT   preventing or treating digestive diseases e.g. colitis and diarrhea.
XX
PS   Example 3; Page 76-77; 93pp; Japanese.
XX
CC   The invention comprises a method for producing an active peptide that has
CC   the same activity as a ZAQ ligand isolated from eukaryotic cells. The
CC   method of the invention is useful for the production of a physiologically
CC   -active ZAQ ligand for use in preventing or treating digestive diseases
CC   (e.g. colitis and diarrhea). The present amino acid sequence represents a
CC   human physiologically active ZAQ ligand-related protein
XX
SQ   Sequence 105 AA;

  Query Match             100.0%;  Score 498;  DB 5;  Length 105;
  Best Local Similarity   100.0%;  Pred. No. 9.1e-47;
  Matches   86;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 AVITGACERDVQCGAGTCCAISLWLRGLRMCTPLGREGEECHPGSHKVPFFRKRKHHTCP 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         20 AVITGACERDVQCGAGTCCAISLWLRGLRMCTPLGREGEECHPGSHKVPFFRKRKHHTCP 79

Qy         61 CLPNLLCSRFPDGRYRCSMDLKNINF 86
              ||||||||||||||||||||||||||
Db         80 CLPNLLCSRFPDGRYRCSMDLKNINF 105


RESULT 26
ABB06308
ID   ABB06308 standard; protein; 105 AA.
XX
AC   ABB06308;
XX
DT   27-MAY-2002  (first entry)
XX
DE   Human G protein-coupled receptor ZAQ ligand protein SEQ ID NO:23.
XX
KW   G protein-coupled receptor; ZAQ ligand; physiologically active peptide;
KW   ZAQ; antidiarrheic; laxative; drug development; digestive disease;
KW   colitis; diarrhoea; constipation; poor-absorption syndrome; gene therapy.
XX
OS   Homo sapiens.
XX
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PN   WO200206483-A1.
XX
PD   24-JAN-2002.
XX
PF   17-JUL-2001; 2001WO-JP006162.
XX
PR   18-JUL-2000; 2000JP-00217442.
PR   02-FEB-2001; 2001JP-00026779.
XX
PA   (TAKE ) TAKEDA CHEM IND LTD.
XX
PI   Ohtaki T,  Masuda Y,  Takatsu Y,  Watanabe T,  Terao Y,  Shintani Y;
PI   Hinuma S;
XX
DR   WPI; 2002-188546/24.
DR   N-PSDB; ABL49637.
XX
PT   Physiologically-active peptides from cows milk, useful for developing
PT   drugs to treat ZAQ-mediated diseases, particularly digestive diseases
PT   like colitis, diarrhea, constipation and poor-absorption syndrome, by
PT   gene therapy.
XX
PS   Claim 5; Page 61; 191pp; Japanese.
XX
CC   The present invention describes a peptide containing an amino acid
CC   sequence (I) identical to or substantially similar to that of the
CC   sequences in ABB06305 or ABB06306, or its salt. (I) has antidiarrheic and
CC   laxative activities. The peptides and encoding DNAs from the present
CC   invention are useful for developing drugs to treat digestive diseases
CC   like colitis, diarrhoea, constipation and poor-absorption syndrome,
CC   including gene therapy. The physiologically-active cows milk-originated
CC   peptides are applicable as a specific ligand of brain-originated orphan G
CC   protein-coupled receptor protein ZAQ. ABL49615 to ABB40659 and ABB06303
CC   to ABB06315 represent sequences used in the exemplification of the
CC   present invention
XX
SQ   Sequence 105 AA;

  Query Match             100.0%;  Score 498;  DB 5;  Length 105;
  Best Local Similarity   100.0%;  Pred. No. 9.1e-47;
  Matches   86;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 AVITGACERDVQCGAGTCCAISLWLRGLRMCTPLGREGEECHPGSHKVPFFRKRKHHTCP 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         20 AVITGACERDVQCGAGTCCAISLWLRGLRMCTPLGREGEECHPGSHKVPFFRKRKHHTCP 79

Qy         61 CLPNLLCSRFPDGRYRCSMDLKNINF 86
              ||||||||||||||||||||||||||
Db         80 CLPNLLCSRFPDGRYRCSMDLKNINF 105


RESULT 27
AAE24382
ID   AAE24382 standard; protein; 105 AA.
XX
AC   AAE24382;
XX
DT   04-OCT-2002  (first entry)
XX
DE   Human prokineticin 1 precursor protein.
XX
KW   Human; prokineticin 1; gastrointestinal motility; intestinal cancer;
KW   irritable bowel syndrome; gastrointestinal reflux disease; diarrhoea;
KW   diabetic gastroparesis; chronic constipation; malabsorptive disorder;
KW   inflammatory bowel disorder; analgesic; infectious disease.
XX
OS   Homo sapiens.
XX
FH   Key             Location/Qualifiers
FT   Peptide         1. .19
FT                   /label= Signal_peptide
FT   Protein         20. .105
FT                   /note= "Mature human prokineticin 1"
XX
PN   WO200236625-A2.
XX
PD   10-MAY-2002.
XX
PF   01-NOV-2001; 2001WO-US047969.
XX
PR   03-NOV-2000; 2000US-0245882P.
XX
PA   (REGC ) UNIV CALIFORNIA.
XX
PI   Zhou Q,  Ehlert FJ;
XX
DR   WPI; 2002-479752/51.
DR   N-PSDB; AAD39321.
XX
PT   New isolated human prokineticin 1 and 2 polypeptides that stimulate
PT   gastrointestinal smooth muscle contraction, useful for improving impaired
PT   gastrointestinal motility in irritable bowel syndrome, chronic
PT   constipation.
XX
PS   Example 1; Fig 1; 86pp; English.
XX
CC   The invention relates to human prokineticin 1 and 2 polypeptides that
CC   stimulate gastrointestinal smooth muscle contraction and nucleic acid
CC   molecules encoding such polypeptides. Polypeptides of the invention are
CC   useful for treating disorders involving impaired gastrointestinal
CC   motility. They are useful for stimulating gastrointestinal motility in
CC   disorders such as irritable bowel syndrome, diabetic gastroparesis, post-
CC   operational ileus, chronic constipation and gastrointestinal reflux
CC   disease. The prokineticin antagonists are useful for inhibiting
CC   gastrointestinal motility in conditions of diarrhoea, malabsorptive
CC   disorders, inflammatory bowel disorders, infectious diseases and
CC   intestinal cancers. The antagonists also act as analgesics. The present
CC   sequence is human prokineticin 1 precursor protein
XX
SQ   Sequence 105 AA;

  Query Match             100.0%;  Score 498;  DB 5;  Length 105;
  Best Local Similarity   100.0%;  Pred. No. 9.1e-47;
  Matches   86;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 AVITGACERDVQCGAGTCCAISLWLRGLRMCTPLGREGEECHPGSHKVPFFRKRKHHTCP 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         20 AVITGACERDVQCGAGTCCAISLWLRGLRMCTPLGREGEECHPGSHKVPFFRKRKHHTCP 79

Qy         61 CLPNLLCSRFPDGRYRCSMDLKNINF 86
              ||||||||||||||||||||||||||
Db         80 CLPNLLCSRFPDGRYRCSMDLKNINF 105


RESULT 28
ABB95508
ID   ABB95508 standard; protein; 105 AA.
XX
AC   ABB95508;
XX
DT   19-JUL-2002  (first entry)
XX
DE   Human angiogenesis related protein PRO1186 SEQ ID NO: 172.
XX
KW   Human; angiogenesis; PRO protein; cardiovascularisation; wound; cancer;
KW   atherosclerosis; cardiac hypertrophy; gene therapy; endothelial disorder;
KW   cardiant; cytostatic; antiangiogenic; hypotensive; vulnerary;
KW   antiarteriosclerotic.
XX
OS   Homo sapiens.
XX
PN   WO200208284-A2.
XX
PD   31-JAN-2002.
XX
PF   09-JUL-2001; 2001WO-US021735.
```

XX
PR 20-JUL-2000; 2000US-0219556P.
PR 25-JUL-2000; 2000US-0220624P.
PR 25-JUL-2000; 2000US-0220664P.
PR 28-JUL-2000; 2000WO-US020710.
PR 02-AUG-2000; 2000US-0222695P.
PR 17-AUG-2000; 2000US-00643657.
PR 23-AUG-2000; 2000WO-US023522.
PR 24-AUG-2000; 2000WO-US023328.
PR 07-SEP-2000; 2000US-0230978P.
PR 18-SEP-2000; 2000US-00664610.
PR 18-SEP-2000; 2000US-00665350.
PR 24-OCT-2000; 2000US-0242922P.
PR 08-NOV-2000; 2000US-00709238.
PR 08-NOV-2000; 2000WO-US030952.
PR 10-NOV-2000; 2000WO-US030873.
PR 01-DEC-2000; 2000WO-US032678.
PR 20-DEC-2000; 2000US-00747259.
PR 20-DEC-2000; 2000WO-US034956.
PR 22-JAN-2001; 2001US-00767609.
PR 28-FEB-2001; 2001US-00796498.
PR 28-FEB-2001; 2001WO-US006520.
PR 01-MAR-2001; 2001WO-US006666.
PR 09-MAR-2001; 2001US-00802706.
PR 14-MAR-2001; 2001US-00808689.
PR 22-MAR-2001; 2001US-00816744.
PR 05-APR-2001; 2001US-00828366.
PR 10-MAY-2001; 2001US-00854208.
PR 10-MAY-2001; 2001US-00854280.
PR 25-MAY-2001; 2001US-00866028.
PR 25-MAY-2001; 2001US-00866034.
PR 25-MAY-2001; 2001WO-US017092.
PR 30-MAY-2001; 2001US-00870574.
PR 30-MAY-2001; 2001WO-US017443.
PR 01-JUN-2001; 2001WO-US017800.
PR 20-JUN-2001; 2001WO-US019692.
XX
PA (GETH) GENENTECH INC.
PA (BAKE/) BAKER K P.
PA (FERR/) FERRARA N.
PA (GERB/) GERBER H.
PA (GERR/) GERRITSEN M E.
PA (GODD/) GODDARD A.
PA (GODO/) GODOWSKI P J.
PA (GURN/) GURNEY A L.
PA (HILL/) HILLAN K J.
PA (MARS/) MARSTERS S A.
PA (PANJ/) PAN J.
PA (PAON/) PAONI N F.
PA (STEP/) STEPHAN J F.
PA (WATA/) WATANABE C K.
PA (WILL/) WILLIAMS P M.
PA (WOOD/) WOOD W I.
XX
PI Baker KP, Ferrara N, Gerber H, Gerritsen ME, Goddard A;
PI Godowski PJ, Gurney AL, Hillan KJ, Marsters SA, Pan J, Paoni NF;
PI Stephan JF, Watanabe CK, Williams PM, Wood WI, Ye W;
XX
DR WPI; 2002-171999/22.
DR N-PSDB; ABL95646.
XX
PT One hundred and eighty seven nucleic acids encoding PRO polypeptides,
PT useful in diagnosis and treatment of cardiovascular (e.g. myocardial
PT infarction), endothelial or angiogenic disorders in a mammal.
XX
PS Claim 11; Fig 172; 567pp; English.
XX
CC The present invention provides the protein and coding sequences of human
CC PRO proteins. These are useful for treating or diagnosing a
CC cardiovascular, endothelial or angiogenic disorder, including cardiac
CC hypertrophy, trauma, cancer, age-related macular degeneration,
CC atherosclerosis, hypertension, arterial restenosis, rheumatoid arthritis,
CC angina, myocardial infarctions, thrombophlebitis, lymphangitis, tumour
CC angiogenesis (such as breast carcinoma and liver carcinoma) and wound
CC healing. The present sequence is a PRO protein of the invention
XX
SQ Sequence 105 AA;

Query Match 100.0%; Score 498; DB 5; Length 105;
Best Local Similarity 100.0%; Pred. No. 9.1e-47;
Matches 86; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 AVITGACERDVQCGAGTCCAISLWLRGLRMCTPLGREGEECHPGSHKVPFFRKRKHHTCP 60
Db 20 AVITGACERDVQCGAGTCCAISLWLRGLRMCTPLGREGEECHPGSHKVPFFRKRKHHTCP 79

Qy 61 CLPNLLCSRFPDGRYRCSMDLKNINF 86
Db 80 CLPNLLCSRFPDGRYRCSMDLKNINF 105

RESULT 29
ABU58083
ID ABU58083 standard; protein; 105 AA.
XX
AC ABU58083;
XX
DT 14-APR-2003 (first entry)
XX
DE Human PRO polypeptide #115.
XX
KW Human; PRO; cytostatic; tumour; cancer; breast; lung; stomach; liver;
KW horse; cow; dog; cat; sheep; pig; goat; rabbit; ADEPT;
KW antibody-dependent enzyme mediated prodrug therapy.
XX
OS Homo sapiens.
XX
PN US2003027163-A1.
XX
PD 06-FEB-2003.
XX
PF 15-NOV-2001; 2001US-00997666.
XX
PR 16-JUN-1997; 97US-0049787P.
PR 17-OCT-1997; 97US-0062250P.
PR 05-NOV-1997; 97WO-US020069.
PR 12-NOV-1997; 97US-0065186P.
PR 13-NOV-1997; 97US-0065311P.
PR 24-NOV-1997; 97US-0066770P.
PR 25-FEB-1998; 98US-0075945P.
PR 20-MAR-1998; 98US-0078910P.
PR 28-APR-1998; 98US-0083322P.
PR 07-MAY-1998; 98US-0084600P.
PR 28-MAY-1998; 98US-0087106P.
PR 02-JUN-1998; 98US-0087607P.
PR 02-JUN-1998; 98US-0087609P.
PR 02-JUN-1998; 98US-0087759P.
PR 03-JUN-1998; 98US-0087827P.
PR 04-JUN-1998; 98US-0088021P.
PR 04-JUN-1998; 98US-0088025P.
PR 04-JUN-1998; 98US-0088026P.
PR 04-JUN-1998; 98US-0088028P.
PR 04-JUN-1998; 98US-0088029P.
PR 04-JUN-1998; 98US-0088030P.
PR 04-JUN-1998; 98US-0088033P.
PR 04-JUN-1998; 98US-0088326P.
PR 05-JUN-1998; 98US-0088167P.
PR 05-JUN-1998; 98US-0088202P.
PR 05-JUN-1998; 98US-0088212P.
PR 05-JUN-1998; 98US-0088217P.
PR 09-JUN-1998; 98US-0088655P.
PR 10-JUN-1998; 98US-0088734P.
PR 10-JUN-1998; 98US-0088738P.
PR 10-JUN-1998; 98US-0088742P.
PR 10-JUN-1998; 98US-0088810P.
PR 10-JUN-1998; 98US-0088824P.

PR 10-JUN-1998; 98US-0088826P.
PR 11-JUN-1998; 98US-0088858P.
PR 11-JUN-1998; 98US-0088861P.
PR 11-JUN-1998; 98US-0088876P.
PR 12-JUN-1998; 98US-0089105P.
PR 16-JUN-1998; 98US-0089440P.
PR 16-JUN-1998; 98US-0089512P.
PR 16-JUN-1998; 98US-0089514P.
PR 17-JUN-1998; 98US-0089532P.
PR 17-JUN-1998; 98US-0089538P.
PR 17-JUN-1998; 98US-0089598P.
PR 17-JUN-1998; 98US-0089599P.
PR 17-JUN-1998; 98US-0089600P.
PR 17-JUN-1998; 98US-0089653P.
PR 18-JUN-1998; 98US-0089801P.
PR 18-JUN-1998; 98US-0089907P.
PR 18-JUN-1998; 98US-0089908P.
PR 19-JUN-1998; 98US-0089947P.
PR 19-JUN-1998; 98US-0089948P.
PR 19-JUN-1998; 98US-0089952P.
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PR 16-DEC-1999; 99WO-US030095.
PR 20-DEC-1999; 99WO-US030911.
PR 05-JAN-2000; 2000WO-US000219.
PR 06-JAN-2000; 2000WO-US000376.
PR 11-FEB-2000; 2000WO-US003565.
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PR 15-MAR-2000; 2000WO-US006884.
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PR 15-MAY-2000; 2000WO-US013358.
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Db         80 CLPNLLCSRFPDGRYRCSMDLKNINF 105


RESULT 30
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ID   ABU59161 standard; protein; 105 AA.
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AC   ABU59161;
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DT   28-APR-2003  (first entry)
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DE   Novel human secreted or transmembrane protein PRO1186.
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KW   Human; PRO; hypertrophy of neonatal heart; angiogenesis; wound healing;
KW   cardiac insufficiency disorder; cancer; tumour; immune response;
KW   adrenal cortical capillary endothelial growth; c-fos induction;
KW   vascular endothelial growth factor inhibition; VEGF inhibition;
KW   endothelial cell growth inhibitor; T-lymphocytes stimulation;
KW   retinal neurons cell survival; rod photoreceptor cell survival;
KW   retinal disorder; retinitis pigmentosum; kidney disorder;
KW   mammalian kidney mesangial cell proliferation; Berger disease;
KW   dermatitis; herpetiformis; Crohn's disease; chondrocyte proliferation;
KW   chondrocyte redifferentiation; sports injury; arthritis.
XX
OS   Homo sapiens.
XX
PN   US2002132252-A1.
XX
PD   19-SEP-2002.
XX
PF   14-NOV-2001; 2001US-00990442.
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PR   07-OCT-1998;   98WO-US021141.
PR   01-DEC-1998;   98WO-US025108.
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PR   02-MAR-2000; 2000WO-US005841.
PR   10-MAR-2000; 2000WO-US006319.
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PR   28-AUG-2001; 2001US-00941992.
XX
PA   (GETH ) GENENTECH INC.
XX
PI   Ashkenazi AJ,  Baker KP,  Botstein D,  Desnoyers L,  Eaton DL;
PI   Ferrara N,  Fong S,  Gerber H,  Gerritsen ME,  Goddard A,  Godowski PJ;
PI   Grimaldi JC,  Gurney AL,  Kljavin IJ,  Napier MA,  Pan J,  Paoni NF;
PI   Roy MA,  Stewart TA,  Tumas D,  Watanabe CK,  Williams PM,  Wood WI;
PI   Zhang Z;
XX
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DR WPI; 2003-247083/24.
DR N-PSDB; ABX80360.
XX
PT Novel isolated PRO polypeptides e.g., PRO826, PRO1068, PRO1184, PRO1346
PT and PRO1375, which stimulate proliferation of stimulated T-lymphocytes
PT are therapeutically useful for enhancing immune response and in cancer
PT treatments.
XX
PS Claim 12; Fig 266; 648pp; English.
XX
CC The invention describes an isolated human PRO polypeptide. The PRO
CC polypeptides are useful in detecting PRO polypeptides in a sample, in
CC linking a bioactive molecule to a cell expressing a PRO polypeptide, and
CC in modulating at least one biological activity of a cell expressing a PRO
CC polypeptide. PRO1312 stimulates hypertrophy of neonatal heart and is thus
CC useful for treating cardiac insufficiency disorders. PRO1154 and PRO1186
CC stimulate adrenal cortical capillary endothelial growth, and PRO536,
CC PRO943, PRO828, PRO826, PRO1068 or PRO535, PRO826, PRO819, PRO1126,
CC PRO1360 and PRO1387 induce c-fos in endothelial cells, and are thus
CC useful for treating conditions or disorders where angiogenesis would be
CC beneficial, e.g. wound healing and antagonist of this polypeptide are
CC useful for treating cancerous tumours. PRO812 inhibits vascular
CC endothelial growth factor (VEGF) stimulated proliferation of endothelial
CC cells and is thus useful for inhibiting endothelial cell growth in
CC mammals which would be beneficial in inhibiting tumour growth. PRO826,
CC PRO1068, PRO1184, PRO1346 and PRO1375 stimulate proliferation of
CC stimulated T-lymphocytes and are therapeutically useful for enhancing
CC immune response. PRO828, PRO826, PRO1068 or PRO1132 enhance survival of
CC retinal neurons cells (PRO1132 is also enhances survival/proliferation of
CC rod photoreceptor cells) and therefore are useful for treating retinal
CC disorders of injuries, e.g. retinitis pigmentosum, AMD. PRO819, PRO813
CC and PRO11066 induce proliferation of mammalian kidney mesangial cells,
CC and therefore are useful for treating kidney disorders associated with
CC decreased mesangial cell function such as Berger disease or other
CC nephropathies associated with dermatitis, herpetiformis or Crohn's
CC disease. PRO1310, PRO844, PRO1312, PRO1192 and PRO1387 induce the
CC proliferation and/or redifferentiation of chondrocytes in culture and are
CC thus useful for treating sports injuries, and arthritis. This is the
CC amino acid sequence of a novel human PRO protein
XX
SQ Sequence 105 AA;

Query Match 100.0%; Score 498; DB 6; Length 105;
Best Local Similarity 100.0%; Pred. No. 9.1e-47;
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Qy         61 CLPNLLCSRFPDGRYRCSMDLKNINF 86
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Db         80 CLPNLLCSRFPDGRYRCSMDLKNINF 105
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RESULT 31
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ID ABU82673 standard; protein; 105 AA.
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AC ABU82673;
XX
DT 26-JUN-2003 (first entry)
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DE Human secreted/transmembrane protein PRO1186.
XX
KW Human; PRO; secreted protein; transmembrane protein;
KW cardiac insufficiency disorders; angiogenesis; wound healing;
KW cancerous tumour; immune response; retinal disorder; sight loss;
KW retinitis pigmentosum; age-related macular degeneration; AMD;
KW kidney disorder; Berger disease; nephropathy; dermatitis; herpetiformis;
KW Crohn's disease; sports injury; arthritis.
XX
OS Homo sapiens.
XX
PN US2003032023-A1.
XX
PD 13-FEB-2003.
XX
PF 14-NOV-2001; 2001US-00990711.
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PR 26-AUG-1998; 98US-0097974P.
PR 26-AUG-1998; 98US-0097978P.
PR 26-AUG-1998; 98US-0097979P.
PR 26-AUG-1998; 98US-0097986P.
PR 26-AUG-1998; 98US-0098014P.
PR 31-AUG-1998; 98US-0098525P.
PR 16-SEP-1998; 98US-0100634P.
PR 16-SEP-1998; 98WO-US019330.
PR 17-SEP-1998; 98US-0100858P.
PR 17-SEP-1998; 98WO-US019437.
PR 07-OCT-1998; 98WO-US021141.
PR 01-DEC-1998; 98WO-US025108.
PR 22-DEC-1998; 98US-0113296P.
PR 05-JAN-1999; 99WO-US000106.
PR 08-MAR-1999; 99WO-US005028.
PR 12-MAR-1999; 99US-0123957P.
PR 02-JUN-1999; 99WO-US012252.
PR 23-JUN-1999; 99US-0141037P.
PR 07-JUL-1999; 99US-0143048P.
PR 20-JUL-1999; 99US-0144758P.
PR 26-JUL-1999; 99US-0145698P.
PR 28-JUL-1999; 99US-0146222P.
PR 17-AUG-1999; 99US-0149396P.
PR 15-SEP-1999; 99WO-US021090.
PR 15-SEP-1999; 99WO-US021547.
PR 08-OCT-1999; 99US-0158663P.
PR 30-NOV-1999; 99WO-US028313.
PR 01-DEC-1999; 99WO-US028301.
PR 01-DEC-1999; 99WO-US028634.
PR 16-DEC-1999; 99WO-US030095.
PR 20-DEC-1999; 99WO-US030911.
PR 05-JAN-2000; 2000WO-US000219.
PR 06-JAN-2000; 2000WO-US000376.
PR 11-FEB-2000; 2000WO-US003565.
PR 18-FEB-2000; 2000WO-US004341.
PR 22-FEB-2000; 2000WO-US004414.
PR 24-FEB-2000; 2000WO-US004914.
PR 24-FEB-2000; 2000WO-US005004.
PR 02-MAR-2000; 2000WO-US005841.
PR 10-MAR-2000; 2000WO-US006319.
PR 15-MAR-2000; 2000WO-US006884.
PR 20-MAR-2000; 2000WO-US007377.
PR 30-MAR-2000; 2000WO-US008439.
PR 15-MAY-2000; 2000WO-US013358.
PR 17-MAY-2000; 2000WO-US013705.
PR 22-MAY-2000; 2000WO-US014042.
PR 30-MAY-2000; 2000WO-US014941.
PR 02-JUN-2000; 2000WO-US015264.
PR 23-JUN-2000; 2000US-0213637P.
PR 28-JUL-2000; 2000WO-US020710.
PR 11-AUG-2000; 2000WO-US022031.

Query Match 100.0%; Score 498; DB 6; Length 105;
Best Local Similarity 100.0%; Pred. No. 9.1e-47;
Matches 86; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

```
Qy          1 AVITGACERDVQCGAGTCCAISLWLRGLRMCTPLGREGEECHPGSHKVPFFRKRKHHTCP 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         20 AVITGACERDVQCGAGTCCAISLWLRGLRMCTPLGREGEECHPGSHKVPFFRKRKHHTCP 79

Qy         61 CLPNLLCSRFPDGRYRCSMDLKNINF 86
              ||||||||||||||||||||||||||
Db         80 CLPNLLCSRFPDGRYRCSMDLKNINF 105
```

RESULT 32
ABO17850
ID ABO17850 standard; protein; 105 AA.
XX
AC ABO17850;
XX
DT 26-AUG-2003 (first entry)
XX
DE Novel human secreted and transmembrane protein PRO1186.
XX
KW Human; secreted and transmembrane protein; PRO; antiinflammatory;
KW antiarteriosclerotic; cardiant; anti-infertility; anti-HIV; cytostatic;
KW antidiabetic; gene therapy; tumour necrosis factor (TNF)-alpha release;
KW TNF-alpha release; cell proliferation; cell differentiation;
KW gene expression modulator; proteoglycan release; cytokine release;
KW tumour; inflammatory disease; organ failure; atherosclerosis;
KW cardiac injury; infertility; birth defect; premature aging; AIDS;
KW acquired immunodeficiency syndrome; cancer; diabetic complication;
KW chromosome mapping; gene mapping; pharmaceutical; diagnostic; biosensor;
KW bioreactor; tissue typing.
XX

OS Homo sapiens.
XX
PN US2003032156-A1.
XX
PD 13-FEB-2003.
XX
PF 06-MAY-2002; 2002US-00140474.
XX
PR 31-MAR-1997; 97WO-US005230.
PR 12-JUN-1998; 98WO-US012456.
PR 14-JUL-1998; 98WO-US014552.
PR 28-AUG-1998; 98WO-US017888.
PR 10-SEP-1998; 98WO-US018824.
PR 14-SEP-1998; 98WO-US019093.
PR 14-SEP-1998; 98WO-US019094.
PR 14-SEP-1998; 98WO-US019177.
PR 16-SEP-1998; 98WO-US019330.
PR 17-SEP-1998; 98WO-US019437.
PR 07-OCT-1998; 98WO-US021141.
PR 29-OCT-1998; 98WO-US022991.
PR 29-OCT-1998; 98WO-US022992.
PR 20-NOV-1998; 98WO-US024855.
PR 01-DEC-1998; 98WO-US025108.
PR 05-JAN-1999; 99WO-US000106.
PR 08-MAR-1999; 99WO-US005028.
PR 10-MAR-1999; 99WO-US005190.
PR 20-APR-1999; 99WO-US008615.
PR 14-MAY-1999; 99WO-US010733.
PR 02-JUN-1999; 99WO-US012252.
PR 01-SEP-1999; 99WO-US020111.
PR 08-SEP-1999; 99WO-US020594.
PR 13-SEP-1999; 99WO-US020944.
PR 15-SEP-1999; 99WO-US021090.
PR 15-SEP-1999; 99WO-US021547.
PR 05-OCT-1999; 99WO-US023089.
PR 29-NOV-1999; 99WO-US028214.
PR 30-NOV-1999; 99WO-US028313.
PR 30-NOV-1999; 99WO-US028409.
PR 01-DEC-1999; 99WO-US028301.
PR 01-DEC-1999; 99WO-US028634.
PR 02-DEC-1999; 99WO-US028551.
PR 02-DEC-1999; 99WO-US028564.
PR 02-DEC-1999; 99WO-US028565.
PR 16-DEC-1999; 99WO-US030095.
PR 20-DEC-1999; 99WO-US030911.
PR 20-DEC-1999; 99WO-US030999.
PR 22-DEC-1999; 99WO-US030720.
PR 30-DEC-1999; 99WO-US031243.
PR 30-DEC-1999; 99WO-US031274.
PR 05-JAN-2000; 2000WO-US000219.
PR 06-JAN-2000; 2000WO-US000277.
PR 06-JAN-2000; 2000WO-US000376.
PR 11-FEB-2000; 2000WO-US003565.
PR 18-FEB-2000; 2000WO-US004341.
PR 18-FEB-2000; 2000WO-US004342.
PR 22-FEB-2000; 2000WO-US004414.
PR 24-FEB-2000; 2000WO-US004914.
PR 24-FEB-2000; 2000WO-US005004.
PR 01-MAR-2000; 2000WO-US005601.
PR 02-MAR-2000; 2000WO-US005746.
PR 02-MAR-2000; 2000WO-US005841.
PR 10-MAR-2000; 2000WO-US006319.
PR 15-MAR-2000; 2000WO-US006884.
PR 20-MAR-2000; 2000WO-US007377.
PR 21-MAR-2000; 2000WO-US007532.
PR 30-MAR-2000; 2000WO-US008439.
PR 17-MAY-2000; 2000WO-US013705.
PR 22-MAY-2000; 2000WO-US014042.
PR 30-MAY-2000; 2000WO-US014941.
PR 02-JUN-2000; 2000WO-US015264.
PR 28-JUL-2000; 2000WO-US020710.
PR 11-AUG-2000; 2000WO-US022031.
PR 23-AUG-2000; 2000WO-US023522.
PR 24-AUG-2000; 2000WO-US023328.
PR 08-NOV-2000; 2000WO-US030952.
PR 10-NOV-2000; 2000WO-US030873.
PR 01-DEC-2000; 2000WO-US032678.
PR 20-DEC-2000; 2000US-00747259.
PR 20-DEC-2000; 2000WO-US034956.
PR 28-FEB-2001; 2001US-00796498.
PR 28-FEB-2001; 2001WO-US006520.
PR 01-MAR-2001; 2001WO-US006666.
PR 09-MAR-2001; 2001US-00802706.
PR 14-MAR-2001; 2001US-00808689.
PR 22-MAR-2001; 2001US-00816744.
PR 05-APR-2001; 2001US-00828366.
PR 10-MAY-2001; 2001US-00854208.
PR 10-MAY-2001; 2001US-00854280.
PR 18-MAY-2001; 2001US-00860216.
PR 25-MAY-2001; 2001US-00866028.
PR 25-MAY-2001; 2001US-00866034.
PR 25-MAY-2001; 2001WO-US017092.
PR 01-JUN-2001; 2001US-00872035.
PR 01-JUN-2001; 2001WO-US017800.
PR 05-JUN-2001; 2001US-00874503.
PR 14-JUN-2001; 2001US-00882636.
PR 19-JUN-2001; 2001US-00886342.
PR 20-JUN-2001; 2001WO-US019692.
PR 21-JUN-2001; 2001US-00887879.
PR 22-JUN-2001; 2001WO-US020116.
PR 29-JUN-2001; 2001WO-US021066.
PR 09-JUL-2001; 2001WO-US021735.
PR 18-JUL-2001; 2001US-00908827.
PR 06-AUG-2001; 2001US-00924419.
PR 09-AUG-2001; 2001US-00927796.
PR 16-AUG-2001; 2001US-00931836.
PR 19-DEC-2001; 2001US-00028072.
XX
PA (GETH) GENENTECH INC.
XX
PI Baker KP, Beresini M, Deforge L, Desnoyers L, Filvaroff E, Gao W;
PI Gerritsen ME, Goddard A, Godowski PJ, Gurney AL, Sherwood S;
PI Smith V, Stewart TA, Tumas D, Watanabe CK, Wood WI, Zhang Z;
XX
DR WPI; 2003-341980/32.
DR N-PSDB; ACD24087.
XX
PT New secreted and transmembrane PRO nucleic acids, for treating
PT inflammation, organ failure, atherosclerosis, cardiac injury,
PT infertility, birth defects, premature aging, axquired immunodeficiency
PT syndrome (AIDS), or cancer.
XX
PS Claim 12; Fig 470; 660pp; English.
XX
CC The invention describes an isolated nucleic acid (I) comprising, or which
CC has 80 % sequence identity to, or the full-length coding sequence of, one
CC of 275 nucleotide sequences, and which encodes a corresponding
CC polypeptide selected from 275 amino acid sequences, where all sequences
CC are given in the specification. The polypeptide encoded by (I) is used to
CC detect PRO polypeptides, link a bioactive molecule to a cell expressing a
CC PRO polypeptide, modulate a biological activity of a cell, stimulate the
CC release of tumour necrosis factor (TNF)-alpha from human blood, modulate
CC the uptake of glucose or free fatty acid by cells, stimulate or inhibit
CC the proliferation or differentiation of cells or gene expression,
CC stimulate the release of proteoglycans, stimulate the release of cytokine
CC from peripheral blood mononuclear cells, inhibit the binding of A-peptide
CC to factor VIIA, or detect the presence of tumour in a mammal. The nucleic
CC acid and polypeptide encoded by it, are useful for treating inflammatory
CC diseases, organ failure, atherosclerosis, cardiac injury, infertility,
CC birth defects, premature aging, acquired immunodeficiency syndrome
CC (AIDS), cancer, or diabetic complications. The nucleic acid is useful as
CC hybridisation probes, in chromosome and gene mapping, and in generating
CC antisense RNA or DNA. The polypeptides are useful as pharmaceuticals,
CC diagnostics, biosensors or bioreactors. Both are useful in tissue typing.
CC This is the amino acid sequence of a novel human secreted and
CC transmembrane PRO polypeptide

```
XX
SQ   Sequence 105 AA;

  Query Match             100.0%;  Score 498;  DB 6;  Length 105;
  Best Local Similarity   100.0%;  Pred. No. 9.1e-47;
  Matches   86;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 AVITGACERDVQCGAGTCCAISLWLRGLRMCTPLGREGEECHPGSHKVPFFRKRKHHTCP 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         20 AVITGACERDVQCGAGTCCAISLWLRGLRMCTPLGREGEECHPGSHKVPFFRKRKHHTCP 79

Qy         61 CLPNLLCSRFPDGRYRCSMDLKNINF 86
              ||||||||||||||||||||||||||
Db         80 CLPNLLCSRFPDGRYRCSMDLKNINF 105


RESULT 33
ABU60592
ID   ABU60592 standard; protein; 105 AA.
XX
AC   ABU60592;
XX
DT   01-MAY-2003  (first entry)
XX
DE   Human secreted/transmembrane protein, #151.
XX
KW   Human; PRO; secreted; transmembrane; signal peptide; pharmaceutical;
KW   diagnostic; therapeutic; gene therapy.
XX
OS   Homo sapiens.
XX
PN   US2002160384-A1.
XX
PD   31-OCT-2002.
XX
PF   14-NOV-2001; 2001US-00992598.
XX
PR   16-JUN-1997;   97US-0049787P.
PR   17-OCT-1997;   97US-0062250P.
PR   05-NOV-1997;   97WO-US020069.
PR   12-NOV-1997;   97US-0065186P.
PR   13-NOV-1997;   97US-0065311P.
PR   24-NOV-1997;   97US-0066770P.
PR   25-FEB-1998;   98US-0075945P.
PR   20-MAR-1998;   98US-0078910P.
PR   28-APR-1998;   98US-0083322P.
PR   07-MAY-1998;   98US-0084600P.
PR   28-MAY-1998;   98US-0087106P.
PR   02-JUN-1998;   98US-0087607P.
PR   02-JUN-1998;   98US-0087609P.
PR   02-JUN-1998;   98US-0087759P.
PR   03-JUN-1998;   98US-0087827P.
PR   04-JUN-1998;   98US-0088021P.
PR   04-JUN-1998;   98US-0088025P.
PR   04-JUN-1998;   98US-0088026P.
PR   04-JUN-1998;   98US-0088028P.
PR   04-JUN-1998;   98US-0088029P.
PR   04-JUN-1998;   98US-0088030P.
PR   04-JUN-1998;   98US-0088033P.
PR   04-JUN-1998;   98US-0088326P.
PR   05-JUN-1998;   98US-0088167P.
PR   05-JUN-1998;   98US-0088202P.
PR   05-JUN-1998;   98US-0088212P.
PR   05-JUN-1998;   98US-0088217P.
PR   09-JUN-1998;   98US-0088655P.
PR   10-JUN-1998;   98US-0088734P.
PR   10-JUN-1998;   98US-0088738P.
PR   10-JUN-1998;   98US-0088742P.
PR   10-JUN-1998;   98US-0088810P.
PR   10-JUN-1998;   98US-0088824P.
PR   10-JUN-1998;   98US-0088826P.
PR   11-JUN-1998;   98US-0088858P.
PR   11-JUN-1998;   98US-0088861P.
PR   11-JUN-1998;   98US-0088876P.
PR   12-JUN-1998;   98US-0089105P.
PR   16-JUN-1998;   98US-0089440P.
PR   16-JUN-1998;   98US-0089512P.
PR   16-JUN-1998;   98US-0089514P.
PR   17-JUN-1998;   98US-0089532P.
PR   17-JUN-1998;   98US-0089538P.
PR   17-JUN-1998;   98US-0089598P.
PR   17-JUN-1998;   98US-0089599P.
PR   17-JUN-1998;   98US-0089600P.
PR   17-JUN-1998;   98US-0089653P.
PR   18-JUN-1998;   98US-0089801P.
PR   18-JUN-1998;   98US-0089907P.
PR   18-JUN-1998;   98US-0089908P.
PR   16-SEP-1998;   98WO-US019330.
PR   17-SEP-1998;   98WO-US019437.
PR   07-OCT-1998;   98WO-US021141.
PR   01-DEC-1998;   98WO-US025108.
PR   05-JAN-1999;   99WO-US000106.
PR   08-MAR-1999;   99WO-US005028.
PR   02-JUN-1999;   99WO-US012252.
PR   15-SEP-1999;   99WO-US021090.
PR   15-SEP-1999;   99WO-US021547.
PR   30-NOV-1999;   99WO-US028313.
PR   01-DEC-1999;   99WO-US028301.
PR   01-DEC-1999;   99WO-US028634.
PR   16-DEC-1999;   99WO-US030095.
PR   20-DEC-1999;   99WO-US030911.
PR   05-JAN-2000; 2000WO-US000219.
PR   06-JAN-2000; 2000WO-US000376.
PR   11-FEB-2000; 2000WO-US003565.
PR   18-FEB-2000; 2000WO-US004341.
PR   22-FEB-2000; 2000WO-US004414.
PR   24-FEB-2000; 2000WO-US004914.
PR   24-FEB-2000; 2000WO-US005004.
PR   02-MAR-2000; 2000WO-US005841.
PR   10-MAR-2000; 2000WO-US006319.
PR   15-MAR-2000; 2000WO-US006884.
PR   20-MAR-2000; 2000WO-US007377.
PR   30-MAR-2000; 2000WO-US008439.
PR   15-MAY-2000; 2000WO-US013358.
PR   17-MAY-2000; 2000WO-US013705.
PR   22-MAY-2000; 2000WO-US014042.
PR   30-MAY-2000; 2000WO-US014941.
PR   02-JUN-2000; 2000WO-US015264.
PR   28-JUL-2000; 2000WO-US020710.
PR   11-AUG-2000; 2000WO-US022031.
PR   23-AUG-2000; 2000WO-US023522.
PR   24-AUG-2000; 2000WO-US023328.
PR   08-NOV-2000; 2000WO-US030952.
PR   01-DEC-2000; 2000WO-US032678.
PR   28-FEB-2001; 2001WO-US006520.
PR   01-JUN-2001; 2001WO-US017800.
PR   20-JUN-2001; 2001WO-US019692.
PR   29-JUN-2001; 2001WO-US021066.
PR   09-JUL-2001; 2001WO-US021735.
PR   28-AUG-2001; 2001US-00941992.
XX
PA   (GETH ) GENENTECH INC.
XX
PI   Ashkenazi AJ,  Baker KP,  Botstein D,  Desnoyers L,  Eaton DL;
PI   Ferrara N,  Fong S,  Gerber H,  Gerritsen ME,  Goddard A,  Godowski PJ;
PI   Grimaldi JC,  Gurney AL,  Kljavin IJ,  Napier MA,  Pan J,  Paoni NF;
PI   Roy MA,  Stewart TA,  Tumas D,  Watanabe CK,  Williams PM,  Wood WI;
PI   Zhang Z;
XX
DR   WPI; 2003-288106/28.
DR   N-PSDB; ABX90338.
XX
PT   New transmembrane polypeptides and nucleic acids encoding the
PT   polypeptides, useful in gene therapy, in chromosome identification, as
PT   chromosome markers, or in generating probes.
XX
```

PS Claim 12; Fig 266; 650pp; English.
XX
CC The invention discloses isolated PRO secreted/transmembrane polypeptides
CC comprising a sequence without signal peptide and the nucleic acid
CC encoding them. The polypeptides can be used to raise antibodies that
CC specifically bind to the PRO polypeptide, for linking a bioactive
CC molecule to a cell expressing a PRO protein and for modulating at least
CC one biological activity of a cell. The PRO polypeptides or
CC polynucleotides are also useful in gene therapy, in chromosome
CC identification, as chromosome markers, or in generating probes. The PRO
CC polypeptides are useful as molecular markers for protein electrophoresis,
CC and the isolated nucleic acids may be used for recombinantly expressing
CC those markers. The PRO polypeptides and nucleic acids may also be used in
CC tissue typing. Anti-PRO antibodies are useful in diagnostic assays for
CC PRO, and in affinity purification of PRO from recombinant cell culture or
CC natural sources. The sequences presented in ABU60478-ABU60624 are the PRO
CC polynucleotides of the invention. Note: The sequence data for this patent
CC is also available in electronic format from USPTO at
CC seqdata.uspto.gov/sequence.html
XX
SQ Sequence 105 AA;

Query Match 100.0%; Score 498; DB 6; Length 105;
Best Local Similarity 100.0%; Pred. No. 9.1e-47;
Matches 86; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 AVITGACERDVQCGAGTCCAISLWLRGLRMCTPLGREGEECHPGSHKVPFFRKRKHHTCP 60
Db 20 AVITGACERDVQCGAGTCCAISLWLRGLRMCTPLGREGEECHPGSHKVPFFRKRKHHTCP 79

Qy 61 CLPNLLCSRFPDGRYRCSMDLKNINF 86
Db 80 CLPNLLCSRFPDGRYRCSMDLKNINF 105

RESULT 34
ABU80821
ID ABU80821 standard; protein; 105 AA.
XX
AC ABU80821;
XX
DT 23-JUN-2003 (first entry)
XX
DE Human PRO polypeptide #83.
XX
KW Human; PRO polypeptide; secreted and transmembrane protein;
KW anti-PRO antibody; diagnostic assay; gene expression; tumour; cytostatic.
XX
OS Homo sapiens.
XX
PN US2003036635-A1.
XX
PD 20-FEB-2003.
XX
PF 28-AUG-2002; 2002US-00230163.
XX
PR 25-JUL-2000; 2000US-0220638P.
PR 01-JUN-2001; 2001WO-US017800.
PR 29-JUN-2001; 2001WO-US021066.
PR 09-APR-2002; 2002US-00119480.
XX
PA (GETH) GENENTECH INC.
XX
PI Baker KP, Desnoyers L, Gerritsen ME, Goddard A, Godowski PJ;
PI Grimaldi JC, Gurney AL, Smith V, Stephan JF, Watanabe CK, Wood WI;
XX
DR WPI; 2003-342045/32.
DR N-PSDB; ACA66923.
XX
PT One hundred and twenty two nucleic acids encoding PRO polypeptides,
PT useful for the manufacture of a medicament for diagnosing or treating
PT tumor.
XX
PS Claim 11; Fig 166; 314pp; English.
XX
CC The present invention relates to the isolation of novel human PRO
CC polypeptides, and the polynucleotide sequences encoding them. The PRO
CC polypeptides are secreted and transmembrane proteins. The PRO
CC polypeptides and polynucleotides are useful for preparing a medicament
CC useful in the diagnosis and treatment of tumours. Anti-PRO antibodies are
CC useful in diagnostic assays for PRO, by detecting its expression in
CC specific cells, tissues or serum, and for affinity purification of PRO
CC from recombinant cell culture or natural sources. ABU80739-ABU80860
CC represent the human PRO polypeptides of the invention. Note: The sequence
CC data for this patent was obtained in electronic format directly from the
CC USPTO web site at seqdata.uspto.gov/psipsDIDEntry.html
XX
SQ Sequence 105 AA;

Query Match 100.0%; Score 498; DB 6; Length 105;
Best Local Similarity 100.0%; Pred. No. 9.1e-47;
Matches 86; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 AVITGACERDVQCGAGTCCAISLWLRGLRMCTPLGREGEECHPGSHKVPFFRKRKHHTCP 60
Db 20 AVITGACERDVQCGAGTCCAISLWLRGLRMCTPLGREGEECHPGSHKVPFFRKRKHHTCP 79

Qy 61 CLPNLLCSRFPDGRYRCSMDLKNINF 86
Db 80 CLPNLLCSRFPDGRYRCSMDLKNINF 105

RESULT 35
ABO33787
ID ABO33787 standard; protein; 105 AA.
XX
AC ABO33787;
XX
DT 17-SEP-2003 (first entry)
XX
DE Novel human secreted and transmembrane protein PRO1186.
XX
KW Human; secreted and transmembrane protein; PRO; cytostatic;
KW antiarthritic; osteopathic; gene therapy; TNF-Agonist-Alpha;
KW chondrocyte stimulator; pericyte stimulator; fibroblast modulator;
KW pharmaceutical; diagnostic; biosensor; bioreactor; tumour; lung tumour;
KW colon tumour; breast tumour; prostate tumour; rectal tumour;
KW liver tumour; bone disorder; cartilage disorder; sports injury;
KW arthritis; wound.
XX
OS Homo sapiens.
XX
PN US2003045687-A1.
XX
PD 06-MAR-2003.
XX
PF 12-AUG-2002; 2002US-00218631.
XX
PR 01-JUN-2001; 2001WO-US017800.
PR 29-JUN-2001; 2001WO-US021066.
PR 09-APR-2002; 2002US-00119480.
XX
PA (GETH) GENENTECH INC.
XX
PI Baker KP, Desnoyers L, Gerritsen ME, Goddard A, Godowski PJ;
PI Grimaldi JC, Gurney AL, Smith V, Stephan JF, Watanabe CK, Wood WI;
XX
DR WPI; 2003-512315/48.
DR N-PSDB; ACD68675.
XX
PT New genes, and its encoded secreted and transmembrane polypeptides,
PT useful for stimulating Tumor Necrosis Factor alpha, or chondrocyte or
PT pericyte proliferation, especially for treating lung tumors, arthritis or
PT wounds in a mammal.
XX
PS Claim 11; Fig 166; 314pp; English.

```
XX
CC   The invention describes an isolated nucleic acid molecule comprising a
CC   sequence with at least 80% identity to: (a) a nucleotide encoding any of
CC   122 PRO (secreted and transmembrane) polypeptides whose sequences are
CC   fully defined in the specification; or (b) any of 122 nucleotide
CC   sequences having e.g. 4834, 2504 or 1759 bp fully defined in the
CC   specification; or the full length coding sequence of any these 122
CC   nucleotide sequences. The PRO polypeptides or polynucleotides are useful
CC   as pharmaceuticals, diagnostics, biosensors or bioreactors. These are
CC   particularly useful for detecting tumours (e.g. lung tumour, colon
CC   tumour, breast tumour, prostate tumour, rectal tumour, or liver tumour)
CC   in a mammal, for stimulating the release of TNF-alpha from human blood,
CC   for stimulating the proliferation or differentiation of chondrocyte
CC   cells, for stimulating proliferation of pericyte cells, or for modulating
CC   normal human dermal fibroblast proliferation. The PRO nucleic acid or
CC   polypeptide is also useful for treating tumours or various bone and/or
CC   cartilage disorders (e.g. sports injuries or arthritis), or wounds. The
CC   PRO polypeptides are useful in drug screening, particularly as targets
CC   for therapeutic intervention in these diseases, and in the diagnostic
CC   determination of the presence of these diseases. The PRO polypeptides are
CC   also useful as molecular weight markers, or for chromosome
CC   identification. The PRO genes are useful as hybridisation probes, or for
CC   screening libraries of human cDNA, genomic DNA or mRNA. The PRO genes may
CC   also be used in gene therapy, particularly for replacing a defective
CC   gene. This is the amino acid sequence of a novel human secreted and
CC   transmembrane PRO polypeptide
XX
SQ   Sequence 105 AA;

  Query Match             100.0%;  Score 498;  DB 6;  Length 105;
  Best Local Similarity   100.0%;  Pred. No. 9.1e-47;
  Matches   86;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 AVITGACERDVQCGAGTCCAISLWLRGLRMCTPLGREGEECHPGSHKVPFFRKRKHHTCP 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         20 AVITGACERDVQCGAGTCCAISLWLRGLRMCTPLGREGEECHPGSHKVPFFRKRKHHTCP 79

Qy         61 CLPNLLCSRFPDGRYRCSMDLKNINF 86
              ||||||||||||||||||||||||||
Db         80 CLPNLLCSRFPDGRYRCSMDLKNINF 105


RESULT 36
ABU13974
ID   ABU13974 standard; protein; 105 AA.
XX
AC   ABU13974;
XX
DT   26-FEB-2003  (first entry)
XX
DE   Human PRO1186 polypeptide.
XX
KW   Human; PRO polypeptide; secreted protein; transmembrane protein;
KW   genetic disorder; antibacterial; immunosuppressive.
XX
OS   Homo sapiens.
XX
PN   US2002103125-A1.
XX
PD   01-AUG-2002.
XX
PF   20-NOV-2001; 2001US-00989731.
XX
PR   16-JUN-1997;   97US-0049787P.
PR   17-OCT-1997;   97US-0062250P.
PR   05-NOV-1997;   97WO-US020069.
PR   12-NOV-1997;   97US-0065186P.
PR   13-NOV-1997;   97US-0065311P.
PR   24-NOV-1997;   97US-0066770P.
PR   25-FEB-1998;   98US-0075945P.
PR   20-MAR-1998;   98US-0078910P.
PR   28-APR-1998;   98US-0083322P.
PR   07-MAY-1998;   98US-0084600P.
PR   28-MAY-1998;   98US-0087106P.
PR   02-JUN-1998;   98US-0087607P.
PR   02-JUN-1998;   98US-0087609P.
PR   02-JUN-1998;   98US-0087759P.
PR   03-JUN-1998;   98US-0087827P.
PR   04-JUN-1998;   98US-0088021P.
PR   04-JUN-1998;   98US-0088025P.
PR   04-JUN-1998;   98US-0088026P.
PR   04-JUN-1998;   98US-0088028P.
PR   04-JUN-1998;   98US-0088029P.
PR   04-JUN-1998;   98US-0088030P.
PR   04-JUN-1998;   98US-0088033P.
PR   04-JUN-1998;   98US-0088326P.
PR   05-JUN-1998;   98US-0088167P.
PR   05-JUN-1998;   98US-0088202P.
PR   05-JUN-1998;   98US-0088212P.
PR   05-JUN-1998;   98US-0088217P.
PR   09-JUN-1998;   98US-0088655P.
PR   10-JUN-1998;   98US-0088734P.
PR   10-JUN-1998;   98US-0088738P.
PR   10-JUN-1998;   98US-0088742P.
PR   10-JUN-1998;   98US-0088810P.
PR   10-JUN-1998;   98US-0088824P.
PR   10-JUN-1998;   98US-0088826P.
PR   11-JUN-1998;   98US-0088858P.
PR   11-JUN-1998;   98US-0088861P.
PR   11-JUN-1998;   98US-0088876P.
PR   12-JUN-1998;   98US-0089105P.
PR   16-JUN-1998;   98US-0089440P.
PR   16-JUN-1998;   98US-0089512P.
PR   16-JUN-1998;   98US-0089514P.
PR   17-JUN-1998;   98US-0089532P.
PR   17-JUN-1998;   98US-0089538P.
PR   17-JUN-1998;   98US-0089598P.
PR   17-JUN-1998;   98US-0089599P.
PR   17-JUN-1998;   98US-0089600P.
PR   17-JUN-1998;   98US-0089653P.
PR   18-JUN-1998;   98US-0089801P.
PR   18-JUN-1998;   98US-0089907P.
PR   18-JUN-1998;   98US-0089908P.
PR   16-SEP-1998;   98WO-US019330.
PR   17-SEP-1998;   98WO-US019437.
PR   07-OCT-1998;   98WO-US021141.
PR   01-DEC-1998;   98WO-US025108.
PR   05-JAN-1999;   99WO-US000106.
PR   08-MAR-1999;   99WO-US005028.
PR   02-JUN-1999;   99WO-US012252.
PR   15-SEP-1999;   99WO-US021090.
PR   15-SEP-1999;   99WO-US021547.
PR   30-NOV-1999;   99WO-US028313.
PR   01-DEC-1999;   99WO-US028301.
PR   01-DEC-1999;   99WO-US028634.
PR   16-DEC-1999;   99WO-US030095.
PR   20-DEC-1999;   99WO-US030911.
PR   06-JAN-2000; 2000WO-US000219.
PR   06-JAN-2000; 2000WO-US000376.
PR   11-FEB-2000; 2000WO-US003565.
PR   18-FEB-2000; 2000WO-US004341.
PR   22-FEB-2000; 2000WO-US004414.
PR   24-FEB-2000; 2000WO-US004914.
PR   24-FEB-2000; 2000WO-US005004.
PR   02-MAR-2000; 2000WO-US005841.
PR   10-MAR-2000; 2000WO-US006319.
PR   15-MAR-2000; 2000WO-US006884.
PR   20-MAR-2000; 2000WO-US007377.
PR   30-MAR-2000; 2000WO-US008439.
PR   15-MAY-2000; 2000WO-US013358.
PR   17-MAY-2000; 2000WO-US013705.
PR   22-MAY-2000; 2000WO-US014042.
PR   30-MAY-2000; 2000WO-US014941.
PR   02-JUN-2000; 2000WO-US015264.
PR   28-JUL-2000; 2000WO-US020710.
PR   11-AUG-2000; 2000WO-US022031.
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PR   23-AUG-2000; 2000WO-US023522.
PR   24-AUG-2000; 2000WO-US023328.
PR   08-NOV-2000; 2000WO-US030952.
PR   01-DEC-2000; 2000WO-US032678.
PR   28-FEB-2001; 2001WO-US006520.
PR   01-JUN-2001; 2001WO-US017800.
PR   20-JUN-2001; 2001WO-US019692.
PR   29-JUN-2001; 2001WO-US021066.
PR   09-JUL-2001; 2001WO-US021735.
PR   28-AUG-2001; 2001US-00941992.
XX
PA   (GETH ) GENENTECH LTD.
XX
PI   Ashkenazi AJ,  Baker KP,  Botstein D,  Desnoyers L,  Eaton DL;
PI   Ferrara N,  Fong S,  Gerber H,  Gerritsen ME,  Goddard A,  Godowski PJ;
PI   Grimaldi JC,  Gurney AL,  Kljavin IJ,  Napier MA,  Pan J,  Paoni NF;
PI   Roy MA,  Stewart TA,  Tumas D,  Watanabe CK,  Williams PM,  Wood WI;
PI   Zhang Z;
XX
DR   WPI; 2003-102117/09.
DR   N-PSDB; ABX64184.
XX
PT   Novel secreted and transmembrane polypeptide for modulating biological
PT   activity of cell expressing the polypeptide, identifying agonists or
PT   antagonists of polypeptide, and as molecular weight markers.
XX
PS   Claim 12; Fig 266; 649pp; English.
XX
CC   The present invention relates to the isolation of novel human PRO
CC   polypeptides, and the polynucleotide sequences encoding them. The PRO
CC   polypeptides are secreted and transmembrane proteins. The PRO
CC   polypeptides are useful for detecting other PRO polypeptides, for linking
CC   bioactive molecules to cells expressing PRO polypeptides, for modulating
CC   biological activities of cells expressing PRO polypeptides, and for for
CC   identifying agonists or antagonists. The polynucleotide sequences
CC   encoding PRO polypeptides are useful as hybridisation probes, in
CC   chromosome and gene mapping, in the generation of antisense RNA and DNA,
CC   in the preparation of PRO polypeptides, for generating transgenic animals
CC   or knockout animals, to construct hybridisation probes for mapping the
CC   gene which encodes the PRO polypeptide, and for the genetic analysis of
CC   individuals with genetic disorders, in gene therapy, for chromosome
CC   identification, as chromosome markers, and for generating probes for PCR,
CC   Northern analysis, Southern analysis and Western analysis. ABU13860-
CC   ABU14006 represent the human PRO polypeptides of the invention. Note: The
CC   sequence data for this patent was obtained in electronic format directly
CC   from the USPTO web site at seqdata.uspto.gov/psipsDIDEntry.html
XX
SQ   Sequence 105 AA;

  Query Match             100.0%;  Score 498;  DB 6;  Length 105;
  Best Local Similarity   100.0%;  Pred. No. 9.1e-47;
  Matches   86;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 AVITGACERDVQCGAGTCCAISLWLRGLRMCTPLGREGEECHPGSHKVPFFRKRKHHTCP 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         20 AVITGACERDVQCGAGTCCAISLWLRGLRMCTPLGREGEECHPGSHKVPFFRKRKHHTCP 79

Qy         61 CLPNLLCSRFPDGRYRCSMDLKNINF 86
              ||||||||||||||||||||||||||
Db         80 CLPNLLCSRFPDGRYRCSMDLKNINF 105


RESULT 37
ABU08800
ID   ABU08800 standard; protein; 105 AA.
XX
AC   ABU08800;
XX
DT   02-JUN-2003  (first entry)
XX
DE   Human endocrine gland-derived vascular endothelial growth factor.
XX
KW   Human; EG-VEGF; sexual maturation; hypogonadotropic hypogonadism;
KW   endocrine gland; vascular endothelial growth factor; ovarian cyst;
KW   cellular proliferation; chemotaxis; congenital adrenal hyperplasia;
KW   precocious puberty; McCune-Albright syndrome; cancer; infertility;
KW   androgen-dependent cancer.
XX
OS   Homo sapiens.
XX
FH   Key             Location/Qualifiers
FT   Peptide         1. .19
FT                   /note= "Signal peptide"
FT   Protein         20. .105
FT                   /note= "Mature EG-VEGF"
FT   Modified-site   33
FT                   /note= "N-myristoylated"
FT   Modified-site   35
FT                   /note= "N-myristoylated"
FT   Modified-site   46
FT                   /note= "N-myristoylated"
XX
PN   US2002192634-A1.
XX
PD   19-DEC-2002.
XX
PF   19-DEC-2001; 2001US-00027603.
XX
PR   11-AUG-1998;   98US-0096146P.
PR   02-JUN-1999;   99WO-US012252.
PR   26-JUL-1999;   99US-0145698P.
PR   25-AUG-1999;   99US-00380137.
PR   05-JAN-2000; 2000WO-US000219.
PR   24-FEB-2000; 2000WO-US004914.
PR   30-MAR-2000; 2000WO-US008439.
PR   23-JUN-2000; 2000US-0213637P.
PR   07-SEP-2000; 2000US-0230978P.
PR   08-NOV-2000; 2000US-00709238.
PR   01-DEC-2000; 2000WO-US032678.
PR   20-JUN-2001; 2001US-00886242.
XX
PA   (FERR/) FERRARA N.
PA   (WATA/) WATANABE C.
PA   (WOOD/) WOOD W I.
PA   (SHEK/) SHEK T.
XX
PI   Ferrara N,  Watanabe C,  Wood WI,  Shek T;
XX
DR   WPI; 2003-352707/33.
DR   N-PSDB; ABX93675.
XX
PT   New anti-endocrine gland-derived vascular endothelial growth factor
PT   monoclonal antibodies 1C6, 2A3, 2A8 or 4H9, useful for regulating
PT   cellular proliferation and chemotaxis.
XX
PS   Example 1; Fig 2; 105pp; English.
XX
CC   The invention relates to an antibody that binds essentially to the
CC   epitope of endocrine gland-derived vascular endothelial growth factors
CC   (EG-VEGF) and is selected from anti-EG-VEGF monoclonal antibodies 1C6,
CC   2A3, 2A8 and 4H9. The composition and methods are useful in regulating
CC   cellular proliferation and chemotaxis, e.g in treating conditions
CC   associated with hormone-producing tissue such as congenital adrenal
CC   hyperplasia, sexual maturation, precocious puberty, McCune-Albright
CC   syndrome, hypogonadotropic hypogonadism, ovarian cyst, cancer such as
CC   androgen-dependent cancer or infertility. The present sequence represents
CC   the amino acid sequence of human endocrine gland-derived vascular
CC   endothelial growth factor
XX
SQ   Sequence 105 AA;

  Query Match             100.0%;  Score 498;  DB 6;  Length 105;
  Best Local Similarity   100.0%;  Pred. No. 9.1e-47;
  Matches   86;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 AVITGACERDVQCGAGTCCAISLWLRGLRMCTPLGREGEECHPGSHKVPFFRKRKHHTCP 60
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Db          20 AVITGACERDVQCGAGTCCAISLWLRGLRMCTPLGREGEECHPGSHKVPFFRKRKHHTCP 79

Qy          61 CLPNLLCSRFPDGRYRCSMDLKNINF 86
                ||||||||||||||||||||||||||
Db          80 CLPNLLCSRFPDGRYRCSMDLKNINF 105


RESULT 38
ABU81104
ID   ABU81104 standard; protein; 105 AA.
XX
AC   ABU81104;
XX
DT   23-JUN-2003  (first entry)
XX
DE   Human PRO polypeptide #235.
XX
KW   Human; PRO polypeptide; secreted and transmembrane protein;
KW   anti-PRO antibody; diagnostic assay; gene expression; diabetes;
KW   bone disorder; cartilage disorder; rheumatoid arthritis; obesity;
KW   sports injury; osteoarthritis; hyper-insulinaemia; hypo-insulinaemia;
KW   hearing loss; coagulation disorder; stroke; heart attack; cardiant;
KW   antidiabetic; anorectic; vulnerary; antiarthritic; osteopathic;
KW   antirheumatic; auditory; cerebroprotective; angiogenic.
XX
OS   Homo sapiens.
XX
PN   US2003004311-A1.
XX
PD   02-JAN-2003.
XX
PF   19-DEC-2001; 2001US-00028072.
XX
PR   18-JUN-1997;   97US-0049911P.
PR   26-AUG-1997;   97US-0056974P.
PR   17-SEP-1997;   97US-0059113P.
PR   17-SEP-1997;   97US-0059115P.
PR   17-SEP-1997;   97US-0059117P.
PR   17-SEP-1997;   97US-0059122P.
PR   17-SEP-1997;   97US-0059184P.
PR   18-SEP-1997;   97US-0059263P.
PR   19-SEP-1997;   97US-0059352P.
PR   19-SEP-1997;   97US-0059588P.
PR   24-SEP-1997;   97US-0059836P.
PR   17-OCT-1997;   97US-0062250P.
PR   17-OCT-1997;   97US-0062285P.
PR   17-OCT-1997;   97US-0062287P.
PR   17-OCT-1997;   97US-0063755P.
PR   24-OCT-1997;   97US-0062814P.
PR   24-OCT-1997;   97US-0062816P.
PR   24-OCT-1997;   97US-0063045P.
PR   24-OCT-1997;   97US-0063082P.
PR   24-OCT-1997;   97US-0063127P.
PR   27-OCT-1997;   97US-0063327P.
PR   27-OCT-1997;   97US-0063329P.
PR   28-OCT-1997;   97US-0063550P.
PR   28-OCT-1997;   97US-0063561P.
PR   29-OCT-1997;   97US-0063704P.
PR   29-OCT-1997;   97US-0063733P.
PR   29-OCT-1997;   97US-0063735P.
PR   29-OCT-1997;   97US-0063738P.
PR   03-NOV-1997;   97US-0064248P.
PR   07-NOV-1997;   97US-0064809P.
PR   12-NOV-1997;   97US-0065186P.
PR   17-NOV-1997;   97US-0065846P.
PR   21-NOV-1997;   97US-0066364P.
PR   24-NOV-1997;   97US-0066453P.
PR   24-NOV-1997;   97US-0066511P.
PR   24-NOV-1997;   97US-0066770P.
PR   11-DEC-1997;   97US-0069212P.
PR   11-DEC-1997;   97US-0069278P.
PR   11-DEC-1997;   97US-0069334P.
PR   16-DEC-1997;   97US-0069694P.
PR   23-JAN-1998;   98US-0072320P.
PR   04-FEB-1998;   98US-0073612P.
PR   09-FEB-1998;   98US-0074086P.
PR   09-FEB-1998;   98US-0074092P.
PR   12-MAR-1998;   98US-0077791P.
PR   20-MAR-1998;   98US-0078910P.
PR   25-MAR-1998;   98US-0079294P.
PR   27-MAR-1998;   98US-0079663P.
PR   27-MAR-1998;   98US-0079728P.
PR   31-MAR-1998;   98US-0080165P.
PR   12-JUN-1998;   98WO-US012456.
PR   14-JUL-1998;   98WO-US014552.
PR   28-AUG-1998;   98WO-US017888.
PR   10-SEP-1998;   98WO-US018824.
PR   14-SEP-1998;   98WO-US019093.
PR   14-SEP-1998;   98WO-US019094.
PR   14-SEP-1998;   98WO-US019177.
PR   16-SEP-1998;   98WO-US019330.
PR   17-SEP-1998;   98WO-US019437.
PR   07-OCT-1998;   98WO-US021141.
PR   29-OCT-1998;   98WO-US022991.
PR   29-OCT-1998;   98WO-US022992.
PR   20-NOV-1998;   98WO-US024855.
PR   01-DEC-1998;   98WO-US025108.
PR   05-JAN-1999;   99WO-US000106.
PR   08-MAR-1999;   99WO-US005028.
PR   10-MAR-1999;   99WO-US005190.
PR   20-APR-1999;   99WO-US008615.
PR   14-MAY-1999;   99WO-US010733.
PR   02-JUN-1999;   99WO-US012252.
PR   01-SEP-1999;   99WO-US020111.
PR   08-SEP-1999;   99WO-US020594.
PR   13-SEP-1999;   99WO-US020944.
PR   15-SEP-1999;   99WO-US021090.
PR   15-SEP-1999;   99WO-US021547.
PR   05-OCT-1999;   99WO-US023089.
PR   29-NOV-1999;   99WO-US028214.
PR   30-NOV-1999;   99WO-US028313.
PR   30-NOV-1999;   99WO-US028409.
PR   01-DEC-1999;   99WO-US028301.
PR   01-DEC-1999;   99WO-US028634.
PR   02-DEC-1999;   99WO-US028551.
PR   02-DEC-1999;   99WO-US028564.
PR   02-DEC-1999;   99WO-US028565.
PR   16-DEC-1999;   99WO-US030095.
PR   20-DEC-1999;   99WO-US030911.
PR   20-DEC-1999;   99WO-US030999.
PR   30-DEC-1999;   99WO-US031243.
PR   30-DEC-1999;   99WO-US031274.
PR   05-JAN-2000; 2000WO-US000219.
PR   06-JAN-2000; 2000WO-US000277.
PR   06-JAN-2000; 2000WO-US000376.
PR   11-FEB-2000; 2000WO-US003565.
PR   18-FEB-2000; 2000WO-US004341.
PR   18-FEB-2000; 2000WO-US004342.
PR   22-FEB-2000; 2000WO-US004414.
PR   24-FEB-2000; 2000WO-US004914.
PR   24-FEB-2000; 2000WO-US005004.
PR   01-MAR-2000; 2000WO-US005601.
PR   02-MAR-2000; 2000WO-US005746.
XX
PA   (GETH ) GENENTECH INC.
XX
PI   Baker KP,  Beresini M,  Deforge L,  Desmoyers L,  Filvaroff E,  Gao W;
PI   Gerritsen ME,  Goddard A,  Godowski PJ,  Gurney AL,  Sherwood S;
PI   Smith V,  Stewart TA,  Tumas D,  Watanabe CK,  Wood WI,  Zhang Z;
XX
DR   WPI; 2003-352836/33.
DR   N-PSDB; ACA67228.
XX
PT   New isolated PRO polypeptide useful for treating diabetes, rheumatoid
PT   arthritis, sports injuries, obesity, hearing loss in mammals, stroke, or
```

PT heart attack.
XX
PS Claim 12; Fig 470; 643pp; English.
XX
CC The present invention relates to the isolation of novel human PRO
CC polypeptides, and the polynucleotide sequences encoding them. The PRO
CC polypeptides are secreted and transmembrane proteins. The PRO
CC polypeptides and polynucleotides are useful for preparing a medicament
CC useful in the treatment of diabetes, bone and/or cartilage disorders
CC (e.g. rheumatoid arthritis, sports injuries, osteoarthritis), obesity,
CC hyper- or hypo-insulinaemia, hearing loss, and coagulation disorders
CC (e.g. stroke, heart attack). Anti-PRO antibodies are useful in diagnostic
CC assays for PRO, by detecting its expression in specific cells, tissues or
CC serum, and for affinity purification of PRO from recombinant cell culture
CC or natural sources. ABU80870-ABU81144 represent the human PRO
CC polypeptides of the invention. Note: The sequence data for this patent
CC was obtained in electronic format directly from the USPTO web site at
CC seqdata.uspto.gov/psipsDIDEntry.html
XX
SQ Sequence 105 AA;

Query Match 100.0%; Score 498; DB 6; Length 105;
Best Local Similarity 100.0%; Pred. No. 9.1e-47;
Matches 86; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 AVITGACERDVQCGAGTCCAISLWLRGLRMCTPLGREGEECHPGSHKVPFFRKRKHHTCP 60
Db 20 AVITGACERDVQCGAGTCCAISLWLRGLRMCTPLGREGEECHPGSHKVPFFRKRKHHTCP 79

Qy 61 CLPNLLCSRFPDGRYRCSMDLKNINF 86
Db 80 CLPNLLCSRFPDGRYRCSMDLKNINF 105

RESULT 39
ABU07603
ID ABU07603 standard; protein; 105 AA.
XX
AC ABU07603;
XX
DT 10-MAY-2003 (first entry)
XX
DE Human ZVEN2.
XX
KW Human; ZVEN2; tumour.
XX
OS Homo sapiens.
XX
PN US6485938-B1.
XX
PD 26-NOV-2002.
XX
PF 14-NOV-2000; 2000US-00712529.
XX
PR 16-NOV-1999; 99US-0165905P.
PR 25-FEB-2000; 2000US-0184875P.
PR 19-APR-2000; 2000US-0197750P.
PR 07-JUN-2000; 2000US-0210332P.
XX
PA (ZYMO) ZYMOGENETICS INC.
XX
PI Sheppard PO, Bishop PD;
XX
DR WPI; 2003-287426/28.
DR N-PSDB; ABX12104, ABX12105.
XX
PT Novel isolated nucleic acid molecule that encodes a Zven1 polypeptide,
PT useful for inhibiting the proliferation of tumor cells, or to detect the
PT expression of a Zven1 or Zven2 gene in a biological sample.
XX
PS Disclosure; Col 3; 37pp; English.
XX
CC The invention relates to an isolated nucleic acid molecule (I) that
CC encodes a Zven1 polypeptide. (I) is useful for inhibiting the
CC proliferation of tumour cells, as probes or primers to clone 5' non-
CC coding regions of a Zven gene, to direct the expression of heterologous
CC gene in tissues of, for example, transgenic animals or patients treated
CC with gene therapy, to detect the expression of a Zven1 or Zven2 gene in a
CC biological sample, to detect activated neutrophils, to identify
CC therapeutic or prophylactic agents that modulate the response of a
CC neutrophil to a pathogen, to determine whether a subject's chromosomes
CC contain a mutation in the Zven gene, or to detect aberrations in Zven1 or
CC Zven2 locus. (I) is useful as educational tools, as laboratory practicum
CC kits for courses related to genetics and molecular biology, protein
CC chemistry and antibody production and analysis. The present sequence
CC represents the amino acid sequence of ZVEN2
XX
SQ Sequence 105 AA;

Query Match 100.0%; Score 498; DB 6; Length 105;
Best Local Similarity 100.0%; Pred. No. 9.1e-47;
Matches 86; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 AVITGACERDVQCGAGTCCAISLWLRGLRMCTPLGREGEECHPGSHKVPFFRKRKHHTCP 60
Db 20 AVITGACERDVQCGAGTCCAISLWLRGLRMCTPLGREGEECHPGSHKVPFFRKRKHHTCP 79

Qy 61 CLPNLLCSRFPDGRYRCSMDLKNINF 86
Db 80 CLPNLLCSRFPDGRYRCSMDLKNINF 105

RESULT 40
ABU72559
ID ABU72559 standard; protein; 105 AA.
XX
AC ABU72559;
XX
DT 17-JUN-2003 (first entry)
XX
DE Novel human secreted and transmembrane protein PRO1186.
XX
KW Human; secreted and transmembrane protein; cytostatic; anti-HIV;
KW virucide; hepatotropic; antiinflammatory; neuroprotective; gene therapy;
KW PRO; pharmaceutical; diagnostic; biosensor; bioreactor; malignancy;
KW cancer; ovarian cancer; colorectal cancer; Kaposi's sarcoma; leukaemia;
KW lymphoma; hepatitis B; multiple sclerosis; Crohn's disease;
KW drug screening.
XX
OS Homo sapiens.
XX
PN US2003003531-A1.
XX
PD 02-JAN-2003.
XX
PF 19-NOV-2001; 2001US-00989734.
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PR 16-JUN-1997; 97US-0049787P.
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PR 17-SEP-1998; 98WO-US019437.
PR 07-OCT-1998; 98WO-US021141.
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PR 08-MAR-1999; 99WO-US005028.
PR 02-JUN-1999; 99WO-US012252.
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PR 15-SEP-1999; 99WO-US021547.
PR 30-NOV-1999; 99WO-US028313.
PR 01-DEC-1999; 99WO-US028301.
PR 01-DEC-1999; 99WO-US028634.
PR 16-DEC-1999; 99WO-US030095.
PR 20-DEC-1999; 99WO-US030911.
PR 05-JAN-2000; 2000WO-US000219.
PR 06-JAN-2000; 2000WO-US000376.
PR 11-FEB-2000; 2000WO-US003565.
PR 18-FEB-2000; 2000WO-US004341.
PR 22-FEB-2000; 2000WO-US004414.
PR 24-FEB-2000; 2000WO-US004914.
PR 24-FEB-2000; 2000WO-US005004.
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PR 10-MAR-2000; 2000WO-US006319.
PR 15-MAR-2000; 2000WO-US006884.
PR 20-MAR-2000; 2000WO-US007377.
PR 30-MAR-2000; 2000WO-US008439.
PR 15-MAY-2000; 2000WO-US013358.
PR 17-MAY-2000; 2000WO-US013705.
PR 22-MAY-2000; 2000WO-US014042.
PR 30-MAY-2000; 2000WO-US014941.
PR 02-JUN-2000; 2000WO-US015264.
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PR 11-AUG-2000; 2000WO-US022031.
PR 23-AUG-2000; 2000WO-US023522.
PR 24-AUG-2000; 2000WO-US023328.
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PR 29-JUN-2001; 2001WO-US021066.
PR 09-JUL-2001; 2001WO-US021735.
PR 28-AUG-2001; 2001US-00941992.
XX
PA (GETH) GENENTECH INC.
XX
PI Ashkenazi AJ, Baker KP, Botstein D, Desnoyers L, Eaton DL;
PI Ferrara N, Fong S, Gerber H, Gerritsen ME, Goddard A, Godowski PJ;
PI Grimaldi JC, Gurney AL, Kljavin IJ, Napier MA, Pan J, Paoni NF;
PI Roy MA, Stewart TA, Tumas D, Watanabe CK, Williams PM, Wood WI;
PI Zhang Z;
XX
DR WPI; 2003-352829/33.
DR N-PSDB; ACA64406.
XX
PT New genes and secreted and transmembrane polypeptides (e.g. PRO183 or
PT PRO184), useful for treating or diagnosing e.g. ovarian cancer, Kaposi's
PT sarcoma, leukemia, lymphoma, hepatitis B, multiple sclerosis or Crohn's
PT disease.
XX
PS Claim 12; Fig 266; 663pp; English.
XX
CC The invention describes a new isolated nucleic acid molecule comprising
CC the full length coding sequence of the DNA deposited with the American
CC Type Culture Collection (e.g. ATCC Deposit No. 209621, 552-PTA, 819-PTA,
CC 209439, 203135, etc); or a sequence with at least 80% identity to a DNA
CC encoding a PRO polypeptide. The PRO polypeptides or polynucleotides are
CC useful as pharmaceuticals, diagnostics, biosensors or bioreactors. These
CC are particularly useful for detecting or treating e.g. malignancies or
CC cancers (e.g. ovarian cancer, colorectal cancer, Kaposi's sarcoma,
CC leukaemia or lymphoma), hepatitis B, multiple sclerosis, or Crohn's
CC disease in mammals. The PRO polypeptides are useful in drug screening,
CC particularly as targets for therapeutic intervention in these diseases,
CC and in the diagnostic determination of the presence of these diseases.
CC The PRO polypeptides are also useful as molecular weight markers, or for
CC chromosome identification. The PRO genes are useful as hybridisation
CC probes, or for screening libraries of human cDNA, genomic DNA or mRNA.
CC The PRO genes may also be used in gene therapy, particularly for
CC replacing a defective gene. This is the amino acid sequence of a novel
CC human secreted and transmembrane PRO polypeptide
XX
SQ Sequence 105 AA;

Query Match 100.0%; Score 498; DB 6; Length 105;
Best Local Similarity 100.0%; Pred. No. 9.1e-47;
Matches 86; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Qy         61 CLPNLLCSRFPDGRYRCSMDLKNINF 86
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GenCore version 5.1.6

OM protein - protein search, using sw model

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Title: US-10-811-328-3
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Listing first 45 summaries

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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

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1	498	100.0	105	4	US-09-712-529-5	Sequence 5, Appli
2	498	100.0	105	4	US-10-212-201A-5	Sequence 5, Appli
3	498	100.0	105	4	US-10-212-355-5	Sequence 5, Appli
4	486	97.6	105	4	US-09-621-976-5350	Sequence 5350, Ap
5	357	71.7	80	4	US-09-513-999C-4698	Sequence 4698, Ap
6	291	58.4	108	4	US-09-712-529-2	Sequence 2, Appli
7	291	58.4	108	4	US-10-212-201A-2	Sequence 2, Appli
8	291	58.4	108	4	US-10-212-355-2	Sequence 2, Appli
9	107.5	21.6	224	3	US-09-161-241-14	Sequence 14, Appl
10	102	20.5	186	4	US-09-949-016-7146	Sequence 7146, Ap
11	102	20.5	207	3	US-09-161-241-13	Sequence 13, Appl
12	102	20.5	259	3	US-09-161-241-12	Sequence 12, Appl
13	102	20.5	259	4	US-09-949-016-6872	Sequence 6872, Ap
14	101	20.3	259	3	US-09-161-241-11	Sequence 11, Appl
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ALIGNMENTS

RESULT 1
US-09-712-529-5
; Sequence 5, Application US/09712529
; Patent No. 6485938
; GENERAL INFORMATION:
; APPLICANT: Sheppard, Paul O.
; APPLICANT: Bishop, Paul D.
; APPLICANT: Whitmore, Theodore E.
; APPLICANT: Thompson, Penny P.
; TITLE OF INVENTION: Human Zven Proteins
; FILE REFERENCE: 99-81
; CURRENT APPLICATION NUMBER: US/09/712,529
; CURRENT FILING DATE: 2000-11-14
; NUMBER OF SEQ ID NOS: 7
; SOFTWARE: FastSEQ for Windows Version 3.0
; SEQ ID NO 5
; LENGTH: 105
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-712-529-5

Query Match 100.0%; Score 498; DB 4; Length 105;
Best Local Similarity 100.0%; Pred. No. 3.6e-51;
Matches 86; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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US-10-212-201A-5
; Sequence 5, Application US/10212201A
; Patent No. 6756479
; GENERAL INFORMATION:
; APPLICANT: Sheppard, Paul O.
; APPLICANT: Bishop, Paul D.
; APPLICANT: Whitmore, Theodore E.
; APPLICANT: Thompson, Penny P.
; TITLE OF INVENTION: Human Zven Proteins
; FILE REFERENCE: 99-81
; CURRENT APPLICATION NUMBER: US/10/212,201A
; CURRENT FILING DATE: 2002-08-02
; PRIOR APPLICATION NUMBER: US/09/712,529
; PRIOR FILING DATE: 2000-11-14
; NUMBER OF SEQ ID NOS: 7

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;  SOFTWARE: FastSEQ for Windows Version 3.0
; SEQ ID NO 5
;   LENGTH: 105
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-10-212-201A-5

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RESULT 3
US-10-212-355-5
; Sequence 5, Application US/10212355
; Patent No. 6828425
; GENERAL INFORMATION:
;  APPLICANT: Sheppard, Paul O.
;  APPLICANT:  Bishop, Paul D.
;  APPLICANT:  Whitmore, Theodore E.
;  APPLICANT:  Thompson, Penny P.
;  TITLE OF INVENTION: Human Zven Proteins
;  FILE REFERENCE: 99-81
;  CURRENT APPLICATION NUMBER: US/10/212,355
;  CURRENT FILING DATE:  2002-08-02
;  NUMBER OF SEQ ID NOS: 7
;  SOFTWARE: FastSEQ for Windows Version 3.0
; SEQ ID NO 5
;   LENGTH: 105
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-10-212-355-5

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RESULT 4
US-09-621-976-5350
; Sequence 5350, Application US/09621976
; Patent No. 6639063
; GENERAL INFORMATION:
;  APPLICANT: Dumas Milne Edwards, J.B.
;  APPLICANT:  Jobert, S.
;  APPLICANT:  Giordano, J.Y.
;  TITLE OF INVENTION: ESTs and Encoded Human Proteins.
;  FILE REFERENCE: GENSET.054PR2
;  CURRENT APPLICATION NUMBER: US/09/621,976
;  CURRENT FILING DATE:  2000-07-21
;  NUMBER OF SEQ ID NOS: 19335
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US-09-621-976-5350

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RESULT 5
US-09-513-999C-4698
; Sequence 4698, Application US/09513999C
; Patent No. 6783961
; GENERAL INFORMATION:
;  APPLICANT: Dumas Milne Edwards, J.B.
;  APPLICANT:  Duclert, A.
;  APPLICANT:  Giordano, J.Y.
;  TITLE OF INVENTION: Expressed Sequence Tags and Encoded Human Proteins.
; Patent No. 6783961
;  FILE REFERENCE: 59.US2.REG
;  CURRENT APPLICATION NUMBER: US/09/513,999C
;  CURRENT FILING DATE:  2000-02-24
;  PRIOR APPLICATION NUMBER: US 60/122,487
;  PRIOR FILING DATE: 1999-02-26
;  NUMBER OF SEQ ID NOS: 36681
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; SEQ ID NO 4698
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;   ORGANISM: Homo sapiens
;   FEATURE:
;   NAME/KEY: SIGNAL
;   LOCATION: -19..-1
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;   OTHER INFORMATION: seq VSIMLLLVTVSDC/AV
US-09-513-999C-4698

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Db         80 C 80


RESULT 6
US-09-712-529-2
; Sequence 2, Application US/09712529
; Patent No. 6485938
; GENERAL INFORMATION:
;  APPLICANT:  Sheppard, Paul O.
;  APPLICANT:  Bishop, Paul D.
;  APPLICANT:  Whitmore, Theodore E.
;  APPLICANT:  Thompson, Penny P.
;  TITLE OF INVENTION:  Human Zven Proteins
;  FILE REFERENCE:  99-81
;  CURRENT APPLICATION NUMBER: US/09/712,529
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;  CURRENT FILING DATE:  2000-11-14
;  NUMBER OF SEQ ID NOS:  7
;  SOFTWARE:  FastSEQ for Windows Version 3.0
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;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-09-712-529-2

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RESULT 7
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; Sequence 2, Application US/10212201A
; Patent No. 6756479
; GENERAL INFORMATION:
;  APPLICANT: Sheppard, Paul O.
;  APPLICANT:  Bishop, Paul D.
;  APPLICANT:  Whitmore, Theodore E.
;  APPLICANT:  Thompson, Penny P.
;  TITLE OF INVENTION: Human Zven Proteins
;  FILE REFERENCE: 99-81
;  CURRENT APPLICATION NUMBER: US/10/212,201A
;  CURRENT FILING DATE:  2002-08-02
;  PRIOR APPLICATION NUMBER: US/09/712,529
;  PRIOR FILING DATE: 2000-11-14
;  NUMBER OF SEQ ID NOS: 7
;  SOFTWARE: FastSEQ for Windows Version 3.0
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;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-10-212-201A-2

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Qy         61 CLPNLLCSRFPDGRYRC 77
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RESULT 8
US-10-212-355-2
; Sequence 2, Application US/10212355
; Patent No. 6828425
; GENERAL INFORMATION:
;  APPLICANT: Sheppard, Paul O.
;  APPLICANT:  Bishop, Paul D.
;  APPLICANT:  Whitmore, Theodore E.
;  APPLICANT:  Thompson, Penny P.
;  TITLE OF INVENTION: Human Zven Proteins
;  FILE REFERENCE: 99-81
;  CURRENT APPLICATION NUMBER: US/10/212,355
;  CURRENT FILING DATE:  2002-08-02
;  NUMBER OF SEQ ID NOS: 7
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;   LENGTH: 108
;   TYPE: PRT
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US-10-212-355-2

  Query Match             58.4%;  Score 291;  DB 4;  Length 108;
  Best Local Similarity   58.4%;  Pred. No. 8.3e-27;
  Matches   45;  Conservative   14;  Mismatches   18;  Indels    0;  Gaps    0;

Qy          1 AVITGACERDVQCGAGTCCAISLWLRGLRMCTPLGREGEECHPGSHKVPFFRKRKHHTCP 60
              |||||||::| ||| | |||:|:|:: :|:|||:|: |: ||| : ||||| :| |||||
Db         28 AVITGACDKDSQCGGGMCCAVSIWVKSIRICTPMGKLGDSCHPLTRKVPFFGRRMHHTCP 87

Qy         61 CLPNLLCSRFPDGRYRC 77
              ||| | | |    |: |
Db         88 CLPGLACLRTSFNRFIC 104


RESULT 9
US-09-161-241-14
; Sequence 14, Application US/09161241
; Patent No. 6344541
; GENERAL INFORMATION:
;  APPLICANT: Bass, Michael B
;  APPLICANT: Sullivan, John K
;  APPLICANT: Theill, Lars E
;  APPLICANT: Wang, Daguang
;  TITLE OF INVENTION: NOVEL DKR POLYPEPTIDES
;  FILE REFERENCE: A-548
;  CURRENT APPLICATION NUMBER: US/09/161,241
;  CURRENT FILING DATE: 1998-09-25
;  NUMBER OF SEQ ID NOS: 78
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 14
;   LENGTH: 224
;   TYPE: PRT
;   ORGANISM: Human
US-09-161-241-14

  Query Match             21.6%;  Score 107.5;  DB 3;  Length 224;
  Best Local Similarity   35.5%;  Pred. No. 7.2e-05;
  Matches   22;  Conservative    5;  Mismatches   32;  Indels    3;  Gaps    1;

Qy          6 ACERDVQCGAGTCCAISLWLRGLRMCTPLGREGEECHPGSHKVPFFRKRKHHTCPCLPNL 65
              :| |   || | |||   |    ::| |:  ||: |    ||          | | | |
Db        144 SCLRTFDCGPGLCCARHFW---TKICKPVLLEGQVCSRRGHKDTAQAPEIFQRCDCGPGL 200

Qy         66 LC 67
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Db        201 LC 202


RESULT 10
US-09-949-016-7146
; Sequence 7146, Application US/09949016
; Patent No. 6812339
; GENERAL INFORMATION:
;  APPLICANT: VENTER, J. Craig et al.
;  TITLE OF INVENTION: POLYMORPHISMS IN KNOWN GENES ASSOCIATED
;  TITLE OF INVENTION:  WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF
;  FILE REFERENCE: CL001307
;  CURRENT APPLICATION NUMBER: US/09/949,016
;  CURRENT FILING DATE:  2000-04-14
;  PRIOR APPLICATION NUMBER: 60/241,755
;  PRIOR FILING DATE: 2000-10-20
;  PRIOR APPLICATION NUMBER: 60/237,768
;  PRIOR FILING DATE: 2000-10-03
;  PRIOR APPLICATION NUMBER: 60/231,498
;  PRIOR FILING DATE: 2000-09-08
;  NUMBER OF SEQ ID NOS: 207012
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 7146
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;   LENGTH: 186
;   TYPE: PRT
;   ORGANISM: Human
US-09-949-016-7146

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  Best Local Similarity   31.5%;  Pred. No. 0.00026;
  Matches   23;  Conservative    8;  Mismatches   30;  Indels   12;  Gaps    3;

Qy          7 CERDVQCGAGTCCAISLWLRGLRMCTPLGREGEEC----HPGSHKVPFFRKRKHHTCPCL 62
              | |    |  | |||    |    ::| |:  :|| |      ||| :  |::     | |
Db        110 CLRSSDCIEGFCCARHFW---TKICKPVLHQGEVCTKQRKKGSHGLEIFQR-----CDCA 161

Qy         63 PNLLCSRFPDGRY 75
               | |  : |  |
Db        162 KGLSCKVWKDATY 174


RESULT 11
US-09-161-241-13
; Sequence 13, Application US/09161241
; Patent No. 6344541
; GENERAL INFORMATION:
;  APPLICANT: Bass, Michael B
;  APPLICANT: Sullivan, John K
;  APPLICANT: Theill, Lars E
;  APPLICANT: Wang, Daguang
;  TITLE OF INVENTION: NOVEL DKR POLYPEPTIDES
;  FILE REFERENCE: A-548
;  CURRENT APPLICATION NUMBER: US/09/161,241
;  CURRENT FILING DATE: 1998-09-25
;  NUMBER OF SEQ ID NOS: 78
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 13
;   LENGTH: 207
;   TYPE: PRT
;   ORGANISM: Human
US-09-161-241-13

  Query Match             20.5%;  Score 102;  DB 3;  Length 207;
  Best Local Similarity   31.5%;  Pred. No. 0.00029;
  Matches   23;  Conservative    8;  Mismatches   30;  Indels   12;  Gaps    3;

Qy          7 CERDVQCGAGTCCAISLWLRGLRMCTPLGREGEEC----HPGSHKVPFFRKRKHHTCPCL 62
              | |    |  | |||    |    ::| |:  :|| |      ||| :  |::     | |
Db        131 CLRSSDCIEGFCCARHFW---TKICKPVLHQGEVCTKQRKKGSHGLEIFQR-----CDCA 182

Qy         63 PNLLCSRFPDGRY 75
               | |  : |  |
Db        183 KGLSCKVWKDATY 195


RESULT 12
US-09-161-241-12
; Sequence 12, Application US/09161241
; Patent No. 6344541
; GENERAL INFORMATION:
;  APPLICANT: Bass, Michael B
;  APPLICANT: Sullivan, John K
;  APPLICANT: Theill, Lars E
;  APPLICANT: Wang, Daguang
;  TITLE OF INVENTION: NOVEL DKR POLYPEPTIDES
;  FILE REFERENCE: A-548
;  CURRENT APPLICATION NUMBER: US/09/161,241
;  CURRENT FILING DATE: 1998-09-25
;  NUMBER OF SEQ ID NOS: 78
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 12
;   LENGTH: 259
;   TYPE: PRT
;   ORGANISM: Human
US-09-161-241-12

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  Best Local Similarity   31.5%;  Pred. No. 0.00037;
  Matches   23;  Conservative    8;  Mismatches   30;  Indels   12;  Gaps    3;

Qy          7 CERDVQCGAGTCCAISLWLRGLRMCTPLGREGEEC----HPGSHKVPFFRKRKHHTCPCL 62
              | |    |  | |||    |    ::| |:  :|| |      ||| :  |::     | |
Db        183 CLRSSDCIEGFCCARHFW---TKICKPVLHQGEVCTKQRKKGSHGLEIFQR-----CDCA 234

Qy         63 PNLLCSRFPDGRY 75
               | |  : |  |
Db        235 KGLSCKVWKDATY 247


RESULT 13
US-09-949-016-6872
; Sequence 6872, Application US/09949016
; Patent No. 6812339
; GENERAL INFORMATION:
;  APPLICANT: VENTER, J. Craig et al.
;  TITLE OF INVENTION: POLYMORPHISMS IN KNOWN GENES ASSOCIATED
;  TITLE OF INVENTION:  WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF
;  FILE REFERENCE: CL001307
;  CURRENT APPLICATION NUMBER: US/09/949,016
;  CURRENT FILING DATE:  2000-04-14
;  PRIOR APPLICATION NUMBER: 60/241,755
;  PRIOR FILING DATE: 2000-10-20
;  PRIOR APPLICATION NUMBER: 60/237,768
;  PRIOR FILING DATE: 2000-10-03
;  PRIOR APPLICATION NUMBER: 60/231,498
;  PRIOR FILING DATE: 2000-09-08
;  NUMBER OF SEQ ID NOS: 207012
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 6872
;   LENGTH: 259
;   TYPE: PRT
;   ORGANISM: Human
US-09-949-016-6872

  Query Match             20.5%;  Score 102;  DB 4;  Length 259;
  Best Local Similarity   31.5%;  Pred. No. 0.00037;
  Matches   23;  Conservative    8;  Mismatches   30;  Indels   12;  Gaps    3;

Qy          7 CERDVQCGAGTCCAISLWLRGLRMCTPLGREGEEC----HPGSHKVPFFRKRKHHTCPCL 62
              | |    |  | |||    |    ::| |:  :|| |      ||| :  |::     | |
Db        183 CLRSSDCIEGFCCARHFW---TKICKPVLHQGEVCTKQRKKGSHGLEIFQR-----CDCA 234

Qy         63 PNLLCSRFPDGRY 75
               | |  : |  |
Db        235 KGLSCKVWKDATY 247


RESULT 14
US-09-161-241-11
; Sequence 11, Application US/09161241
; Patent No. 6344541
; GENERAL INFORMATION:
;  APPLICANT: Bass, Michael B
;  APPLICANT: Sullivan, John K
;  APPLICANT: Theill, Lars E
;  APPLICANT: Wang, Daguang
;  TITLE OF INVENTION: NOVEL DKR POLYPEPTIDES
;  FILE REFERENCE: A-548
;  CURRENT APPLICATION NUMBER: US/09/161,241
;  CURRENT FILING DATE: 1998-09-25
;  NUMBER OF SEQ ID NOS: 78
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 11
;   LENGTH: 259
;   TYPE: PRT
;   ORGANISM: Mouse
US-09-161-241-11

  Query Match             20.3%;  Score 101;  DB 3;  Length 259;
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GenCore version 5.1.6

OM protein - protein search, using sw model

Run on: November 7, 2005, 20:52:11 ; Search time 116.383 Seconds
(without alignments)
309.179 Million cell updates/sec

Title: US-10-811-328-3
Perfect score: 498
Sequence: 1 AVITGACERDVQCGAGTCCA.....CSRFPDGRYRCSMDLKNINF 86

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 1867879 seqs, 418409474 residues

Total number of hits satisfying chosen parameters: 1867879

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : Published_Applications_AA:*
1: /cgn2_6/ptodata/1/pubpaa/US07_PUBCOMB.pep:*
2: /cgn2_6/ptodata/1/pubpaa/PCT_NEW_PUB.pep:*
3: /cgn2_6/ptodata/1/pubpaa/US06_NEW_PUB.pep:*
4: /cgn2_6/ptodata/1/pubpaa/US06_PUBCOMB.pep:*
5: /cgn2_6/ptodata/1/pubpaa/US07_NEW_PUB.pep:*
6: /cgn2_6/ptodata/1/pubpaa/PCTUS_PUBCOMB.pep:*
7: /cgn2_6/ptodata/1/pubpaa/US08_NEW_PUB.pep:*
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9: /cgn2_6/ptodata/1/pubpaa/US09A_PUBCOMB.pep:*
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17: /cgn2_6/ptodata/1/pubpaa/US10E_PUBCOMB.pep:*
18: /cgn2_6/ptodata/1/pubpaa/US10_NEW_PUB.pep:*
19: /cgn2_6/ptodata/1/pubpaa/US11A_PUBCOMB.pep:*
20: /cgn2_6/ptodata/1/pubpaa/US11_NEW_PUB.pep:*
21: /cgn2_6/ptodata/1/pubpaa/US60_NEW_PUB.pep:*
22: /cgn2_6/ptodata/1/pubpaa/US60_PUBCOMB.pep:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1	498	100.0	86	13	US-10-016-481-3	Sequence 3, Appli
2	498	100.0	86	14	US-10-323-157-3	Sequence 3, Appli
3	498	100.0	86	15	US-10-417-426-9	Sequence 9, Appli
4	498	100.0	86	15	US-10-333-192-21	Sequence 21, Appl
5	498	100.0	86	16	US-10-680-554-5	Sequence 5, Appli
6	498	100.0	86	16	US-10-713-567-3	Sequence 3, Appli
7	498	100.0	86	17	US-10-811-328-3	Sequence 3, Appli
8	498	100.0	86	17	US-10-912-907-3	Sequence 3, Appli
9	498	100.0	86	17	US-10-415-724-3	Sequence 3, Appli
10	498	100.0	86	18	US-10-871-152-22	Sequence 22, Appl
11	498	100.0	86	18	US-10-503-554A-82	Sequence 82, Appl
12	498	100.0	86	18	US-10-343-095A-117	Sequence 117, App
13	498	100.0	87	13	US-10-016-481-18	Sequence 18, Appl
14	498	100.0	87	14	US-10-323-157-18	Sequence 18, Appl
15	498	100.0	87	16	US-10-713-567-18	Sequence 18, Appl
16	498	100.0	87	17	US-10-811-328-18	Sequence 18, Appl
17	498	100.0	87	17	US-10-912-907-18	Sequence 18, Appl
18	498	100.0	87	17	US-10-415-724-18	Sequence 18, Appl
19	498	100.0	89	13	US-10-016-481-15	Sequence 15, Appl
20	498	100.0	89	14	US-10-323-157-15	Sequence 15, Appl
21	498	100.0	89	16	US-10-713-567-15	Sequence 15, Appl
22	498	100.0	89	17	US-10-811-328-15	Sequence 15, Appl
23	498	100.0	89	17	US-10-912-907-15	Sequence 15, Appl
24	498	100.0	89	17	US-10-415-724-15	Sequence 15, Appl
25	498	100.0	105	9	US-09-989-722-371	Sequence 371, App
26	498	100.0	105	9	US-09-989-723-371	Sequence 371, App
27	498	100.0	105	9	US-09-989-279-371	Sequence 371, App
28	498	100.0	105	9	US-09-989-727-371	Sequence 371, App
29	498	100.0	105	9	US-09-989-731-371	Sequence 371, App
30	498	100.0	105	9	US-09-989-732-371	Sequence 371, App
31	498	100.0	105	9	US-09-991-073-371	Sequence 371, App
32	498	100.0	105	9	US-09-990-442-371	Sequence 371, App
33	498	100.0	105	9	US-09-991-163-371	Sequence 371, App
34	498	100.0	105	9	US-09-993-604-371	Sequence 371, App
35	498	100.0	105	9	US-09-990-456-371	Sequence 371, App
36	498	100.0	105	9	US-09-989-721-371	Sequence 371, App
37	498	100.0	105	9	US-09-992-598-371	Sequence 371, App
38	498	100.0	105	9	US-09-886-242A-2	Sequence 2, Appli
39	498	100.0	105	9	US-09-989-293A-371	Sequence 371, App
40	498	100.0	105	9	US-09-965-528-11	Sequence 11, Appl
41	498	100.0	105	9	US-09-989-735-371	Sequence 371, App
42	498	100.0	105	9	US-09-990-444-371	Sequence 371, App
43	498	100.0	105	9	US-09-991-181-371	Sequence 371, App
44	498	100.0	105	9	US-09-989-730-371	Sequence 371, App
45	498	100.0	105	9	US-09-990-436-371	Sequence 371, App

ALIGNMENTS

RESULT 1
US-10-016-481-3
; Sequence 3, Application US/10016481
; Publication No. US20020115610A1
; GENERAL INFORMATION:
; APPLICANT: Zhou, Qun-Yong
; APPLICANT: Ehlert, Frederick
; TITLE OF INVENTION: Prokineticin Polypeptides, Related
; TITLE OF INVENTION: Compositions and Methods
; FILE REFERENCE: P-UC 5016
; CURRENT APPLICATION NUMBER: US/10/016,481
; CURRENT FILING DATE: 2001-11-01
; PRIOR APPLICATION NUMBER: 60/245,882
; PRIOR FILING DATE: 2000-11-03
; NUMBER OF SEQ ID NOS: 19
; SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 3
; LENGTH: 86
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-016-481-3

Query Match 100.0%; Score 498; DB 13; Length 86;
Best Local Similarity 100.0%; Pred. No. 2.6e-45;
Matches 86; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Qy          1 AVITGACERDVQCGAGTCCAISLWLRGLRMCTPLGREGEECHPGSHKVPFFRKRKHHTCP 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 AVITGACERDVQCGAGTCCAISLWLRGLRMCTPLGREGEECHPGSHKVPFFRKRKHHTCP 60

Qy         61 CLPNLLCSRFPDGRYRCSMDLKNINF 86
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Db         61 CLPNLLCSRFPDGRYRCSMDLKNINF 86
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RESULT 2
US-10-323-157-3
; Sequence 3, Application US/10323157
; Publication No. US20030113867A1
; GENERAL INFORMATION:
; APPLICANT: Zhou, Qun-Yong
; APPLICANT: Ehlert, Frederick
; TITLE OF INVENTION: Prokineticin Polypeptides, Related
; TITLE OF INVENTION: Compositions and Methods
; FILE REFERENCE: P-UC 5016
; CURRENT APPLICATION NUMBER: US/10/323,157
; CURRENT FILING DATE: 2002-12-18
; PRIOR APPLICATION NUMBER: US/10/016,481
; PRIOR FILING DATE: 2001-11-01
; PRIOR APPLICATION NUMBER: 60/245,882
; PRIOR FILING DATE: 2000-11-03
; NUMBER OF SEQ ID NOS: 19
; SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 3
; LENGTH: 86
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-323-157-3

Query Match 100.0%; Score 498; DB 14; Length 86;
Best Local Similarity 100.0%; Pred. No. 2.6e-45;
Matches 86; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Qy          1 AVITGACERDVQCGAGTCCAISLWLRGLRMCTPLGREGEECHPGSHKVPFFRKRKHHTCP 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 AVITGACERDVQCGAGTCCAISLWLRGLRMCTPLGREGEECHPGSHKVPFFRKRKHHTCP 60

Qy         61 CLPNLLCSRFPDGRYRCSMDLKNINF 86
              ||||||||||||||||||||||||||
Db         61 CLPNLLCSRFPDGRYRCSMDLKNINF 86
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RESULT 3
US-10-417-426-9
; Sequence 9, Application US/10417426
; Publication No. US20030235535A1
; GENERAL INFORMATION:
; APPLICANT: Zhou, Qun-Yong
; APPLICANT: Bullock, Clayton M.
; TITLE OF INVENTION: Screening and Therapeutic Methods For
; TITLE OF INVENTION: Treating Circadian Rhythm Disorders
; FILE REFERENCE: P-UC 5773
; CURRENT APPLICATION NUMBER: US/10/417,426
; CURRENT FILING DATE: 2003-04-15
; PRIOR APPLICATION NUMBER: US 60/372,836
; PRIOR FILING DATE: 2002-04-15
; NUMBER OF SEQ ID NOS: 21
; SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 9
; LENGTH: 86
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-417-426-9

Query Match 100.0%; Score 498; DB 15; Length 86;
Best Local Similarity 100.0%; Pred. No. 2.6e-45;
Matches 86; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 AVITGACERDVQCGAGTCCAISLWLRGLRMCTPLGREGEECHPGSHKVPFFRKRKHHTCP 60

Qy         61 CLPNLLCSRFPDGRYRCSMDLKNINF 86
              ||||||||||||||||||||||||||
Db         61 CLPNLLCSRFPDGRYRCSMDLKNINF 86
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RESULT 4
US-10-333-192-21
; Sequence 21, Application US/10333192
; Publication No. US20040077535A1
; GENERAL INFORMATION:
; APPLICANT: OHTAKI, Tetsuya
; APPLICANT: MASUDA, Yasushi
; APPLICANT: TAKATSU, Yoshihiro
; APPLICANT: WATANABE, Takuya
; APPLICANT: TERAO, Yasuko
; APPLICANT: SHINTANI, Yasushi
; APPLICANT: HINUMA, Syuji
; TITLE OF INVENTION: Novel Physiologically Active Peptide and Use Thereof
; FILE REFERENCE: 2762US0P
; CURRENT APPLICATION NUMBER: US/10/333,192
; CURRENT FILING DATE: 2003-01-16
; PRIOR APPLICATION NUMBER: JP 2000-217442
; PRIOR FILING DATE: 2000-07-18
; PRIOR APPLICATION NUMBER: JP 2001-26779
; PRIOR FILING DATE: 2001-02-02
; PRIOR APPLICATION NUMBER: PCT/JP01/06162
; PRIOR FILING DATE: 2001-07-17
; NUMBER OF SEQ ID NOS: 58
; SEQ ID NO 21
; LENGTH: 86
; TYPE: PRT
; ORGANISM: Human
US-10-333-192-21

Query Match 100.0%; Score 498; DB 15; Length 86;
Best Local Similarity 100.0%; Pred. No. 2.6e-45;
Matches 86; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 AVITGACERDVQCGAGTCCAISLWLRGLRMCTPLGREGEECHPGSHKVPFFRKRKHHTCP 60

Qy         61 CLPNLLCSRFPDGRYRCSMDLKNINF 86
              ||||||||||||||||||||||||||
Db         61 CLPNLLCSRFPDGRYRCSMDLKNINF 86
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RESULT 5
US-10-680-554-5
; Sequence 5, Application US/10680554
; Publication No. US20040229291A1
; GENERAL INFORMATION:
; APPLICANT: Zhou, Qun-Yong
; APPLICANT: Cheng, Michelle Y.
; TITLE OF INVENTION: Screening and Therapeutic Methods
; TITLE OF INVENTION: Relating to Neurogenesis
; FILE REFERENCE: 66778-356
; CURRENT APPLICATION NUMBER: US/10/680,554
; CURRENT FILING DATE: 2003-10-03
; PRIOR APPLICATION NUMBER: US 60/416,202
; PRIOR FILING DATE: 2002-10-04
; NUMBER OF SEQ ID NOS: 21
; SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 5
; LENGTH: 86
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-680-554-5

Query Match 100.0%; Score 498; DB 16; Length 86;
Best Local Similarity 100.0%; Pred. No. 2.6e-45;
Matches 86; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Db          1 AVITGACERDVQCGAGTCCAISLWLRGLRMCTPLGREGEECHPGSHKVPFFRKRKHHTCP 60

Qy         61 CLPNLLCSRFPDGRYRCSMDLKNINF 86
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GenCore version 5.1.6

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Run on: November 7, 2005, 20:48:31 ; Search time 24.7186 Seconds
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334.754 Million cell updates/sec

Title: US-10-811-328-3
Perfect score: 498
Sequence: 1 AVITGACERDVQCGAGTCCA.....CSRFPDGRYRCSMDLKNINF 86

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 283416 seqs, 96216763 residues

Total number of hits satisfying chosen parameters: 283416

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

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2: pir2:*
3: pir3:*
4: pir4:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
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2	88.5	17.8	640	2	T08179	LRG5 protein - Chl
3	81	16.3	1964	2	T09059	notch4 - mouse
4	77.5	15.6	473	2	A56175	adhesive plaque pr
5	75	15.1	2531	2	T31070	notch homolog - se
6	73	14.7	112	1	XLHU	colipase precursor
7	72.5	14.6	461	1	A35356	tumor necrosis fac
8	71.5	14.4	1178	1	A39804	thrombospondin pre
9	71.5	14.4	1574	2	T13954	MEGF6 protein - ra
10	71.5	14.4	1854	2	T13576	hypothetical prote
11	71	14.3	112	2	I51909	colipase precursor
12	71	14.3	286	2	S34665	collagen, cuticula
13	71	14.3	593	1	GYHU	granulin precursor
14	70.5	14.2	591	2	I48141	acrogranin - guine
15	70.5	14.2	1101	2	T16840	hypothetical prote
16	70.5	14.2	2318	2	S45306	notch 3 protein -
17	70	14.1	251	2	A55035	cysteine-rich prot
18	69	13.9	601	2	B36346	fibulin 1 precurso
19	69	13.9	683	2	C36346	fibulin 1 precurso
20	68.5	13.8	850	2	T14450	serine/threonine k
21	68.5	13.8	1172	2	A42587	thrombospondin 2 p
22	68.5	13.8	1639	1	MMFFB2	laminin gamma-1 ch
23	68	13.7	112	2	A46717	colipase precursor
24	68	13.7	427	1	GQHUN	nerve growth facto
25	68	13.7	547	2	A33901	mannosyl-oligosacc
26	68	13.7	586	1	WMBEDE	65K early nonstruc
27	68	13.7	1150	2	A41641	mannosyl-oligosacc
28	68	13.7	2215	2	T00348	LR11 protein - mou
29	68	13.7	5147	1	IJFFTM	cadherin-related t
30	67.5	13.6	108	2	C88450	protein F21H11.4 [
31	67	13.5	237	2	S45463	probable membrane
32	67	13.5	993	2	I48653	mouse developmenta
33	67	13.5	1620	2	T27283	hypothetical prote
34	67	13.5	2321	2	S78549	notch3 protein - h
35	66.5	13.4	589	2	C38128	epithelin/granulin
36	66.5	13.4	589	2	B38128	epithelin/granulin
37	66.5	13.4	1376	2	G00043	osteonidogen - hum
38	66.5	13.4	4545	1	S25111	alpha-2-macroglobu
39	66	13.3	1172	1	TSHUP2	thrombospondin 2 p
40	66	13.3	1327	2	D70759	probable otsB prot
41	66	13.3	3075	2	S14458	laminin alpha-1 ch
42	66	13.3	3712	2	S18253	laminin alpha-1 ch
43	65.5	13.2	722	2	I48324	DELTA-like 1 - mou
44	65.5	13.2	802	2	T24293	hypothetical prote
45	65.5	13.2	949	2	T24294	hypothetical prote

ALIGNMENTS

RESULT 1
JC7188
REIC protein - human
C;Species: Homo sapiens (man)
C;Date: 04-Mar-2000 #sequence_revision 04-Mar-2000 #text_change 11-May-2000
C;Accession: JC7188
R;Tsugi, T.; Miyazaki, M.; Sakaguchi, M.; Inoue, Y.; Namba, M.
Biochem. Biophys. Res. Commun. 268, 20-24, 2000
A;Title: A REIC gene shows down-regulation in human immortalized cells and human tumor-
A;Reference number: JC7188; MUID:20119095; PMID:10652205
A;Accession: JC7188
A;Molecule type: mRNA
A;Residues: 1-350 <TSU>
A;Cross-references: DDBJ:AB034203
A;Experimental source: heart
C;Comment: This protein is a secreted glycoprotein for head induction in amphibian embr
C;Genetics:
A;Gene: reic
C;Superfamily: human REIC protein
C;Keywords: cardiac muscle; coiled coil; glycoprotein; heart; tumor

Query Match 20.2%; Score 100.5; DB 2; Length 350;
Best Local Similarity 37.7%; Pred. No. 0.0038;
Matches 26; Conservative 3; Mismatches 29; Indels 11; Gaps 4;

```
Qy          7 CERDVQCGAGTCCAISLWLRGL--RMCTPLGREGEECH-PGSHKVPFFRKRKH-----HT 58
              |:    |  | |||     |||   :|||| ||| || | |  :
Db        208 CDNQRDCQPGLCCAFQ---RGLLFPVCTPLPVEGELCHDPASRLLDLITWELEPDGALDR 264

Qy         59 CPCLPNLLC 67
              |||   |||
Db        265 CPCASGLLC 273
```

RESULT 2
T08179
LRG5 protein - Chlamydomonas reinhardtii
C;Species: Chlamydomonas reinhardtii
C;Date: 11-Jun-1999 #sequence_revision 11-Jun-1999 #text_change 09-Jul-2004
C;Accession: T08179
R;Gloeckner, G.; Beck, C.F.
submitted to the EMBL Data Library, October 1996
A;Description: Molecular characterization of a gene (LRG5) involved in blue light signa
A;Reference number: Z16399
A;Accession: T08179
A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Molecule type: mRNA
A;Residues: 1-640 <GLO>
A;Cross-references: UNIPROT:Q96397; EMBL:U73817; NID:g1644369; PID:g1644370
C;Genetics:
A;Gene: LRG5

```
  Query Match             17.8%;  Score 88.5;  DB 2;  Length 640;
  Best Local Similarity   31.6%;  Pred. No. 0.11;
  Matches   24;  Conservative    5;  Mismatches   24;  Indels   23;  Gaps    4;

Qy         13 CGAGTCCAISLWLRGLRMCTPLGREGEECHPGSHKVPFFRKRKHHTCPCLPNLLCSRF-- 70
              | || ||    |:     | |:   |          |        || |||   |||:
Db        488 CTAGRCC----WM----TCLPMWGSGGTWPWRPLMTP------SRTCACLPTPCCSRWLR 533

Qy         71 -------PDGRYRCSM 79
                     | ||:|||:
Db        534 RWRCGWAPGGRWRCSL 549


RESULT 3
T09059
notch4 - mouse
C;Species: Mus musculus (house mouse)
C;Date: 11-Jun-1999 #sequence_revision 11-Jun-1999 #text_change 09-Jul-2004
C;Accession: T09059
R;Rowen, L.; Mahairas, G.; Qin, S.; Ahearn, M.E.; Dankers, C.; Lasky, S.; Loretz, C.; Sc
submitted to the EMBL Data Library, October 1997
A;Description: Sequence of the mouse major histocompatibility locus class III region.
A;Reference number: Z16543
A;Accession: T09059
A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Molecule type: DNA
A;Residues: 1-1964 <ROW>
A;Cross-references: UNIPROT:P31695; EMBL:AF030001; NID:g2564945; PID:g2564947
C;Genetics:
A;Gene: notch4
A;Map position: 17
A;Introns: 22/1; 49/2; 148/1; 264/1; 305/1; 384/1; 436/1; 501/1; 539/1; 577/1; 618/1; 67
1679/3; 1729/1; 1761/3
C;Superfamily: notch protein; ankyrin repeat homology; EGF homology
C;Keywords: receptor; signal transduction
F;514-545/Domain: EGF homology <EGF>

  Query Match             16.3%;  Score 81;  DB 2;  Length 1964;
  Best Local Similarity   30.4%;  Pred. No. 1.8;
  Matches   24;  Conservative    7;  Mismatches   22;  Indels   26;  Gaps    5;

Qy          7 CERDVQ--------CGAGTCCAISLWLRGLRMC-TPLGREGEECHPGSHKVPFFRKRKHH 57
              ||||:         |  || |  :|   |   |  |:|:|| :|           | :
Db        188 CERDINECFLEPGPCPQGTSCHNTL---GSYQCLCPVGQEGPQC----------KLRKG 233

Qy         58 TCP---CLPNLLCSRFPDG 73
              ||   ||     |   |:|
Db        234 ACPPGSCLNGGTCQLVPEG 252


RESULT 4
A56175
adhesive plaque protein Mgfp2 precursor - Mediterranean mussel
C;Species: Mytilus galloprovincialis (Mediterranean mussel)
C;Date: 27-Apr-1995 #sequence_revision 03-Oct-1995 #text_change 09-Jul-2004
C;Accession: A56175
R;Inoue, K.; Takeuchi, Y.; Miki, D.; Odo, S.
J. Biol. Chem. 270, 6698-6701, 1995
A;Title: Mussel adhesive plaque protein gene is a novel member of epidermal growth facto
A;Reference number: A56175; MUID:95204464; PMID:7896812
A;Accession: A56175
A;Molecule type: mRNA
A;Residues: 1-473 <INO>
A;Cross-references: UNIPROT:Q25464; GB:D43794; NID:g602767; PIDN:BAA07852.1; PID:d100843
C;Keywords: duplication
F;1-17/Domain: signal sequence #status predicted <SIG>
F;387-419/Domain: EGF homology <EGF1>
F;429-460/Domain: EGF homology <EGF>
F;23,36,43,56,75,382,424,455,468,473/Modified site: 3',4'-dihydroxyphenylalanine (Tyr) #

  Query Match             15.6%;  Score 77.5;  DB 2;  Length 473;
  Best Local Similarity   31.2%;  Pred. No. 1.2;
  Matches   24;  Conservative   11;  Mismatches   23;  Indels   19;  Gaps    7;

Qy          7 CERDVQCGAGTCCAISLWLRGLRMCTPLGREGEECH-PGSHKVPFFRKRKHHTC---PCL 62
              ||::| |    |       :    |:|||: | :|   | :  |   : : | |   ||
Db        117 CEKNV-CSPNPC-------KNNGKCSPLGKTGYKCTCSGGYTGP---RCEVHACKPNPCK 165

Qy         63 PNLLCSRFPDGR--YRC 77
                 |  ||||:  |:|
Db        166 NKGRC--FPDGKTGYKC 180


RESULT 5
T31070
notch homolog - sea urchin (Lytechinus variegatus)
C;Species: Lytechinus variegatus (variegated urchin)
C;Date: 22-Oct-1999 #sequence_revision 22-Oct-1999 #text_change 31-Jan-2000
C;Accession: T31070
R;Sherwood, D.R.; McClay, D.R.
Development 124, 3363-3374, 1997
A;Title: Identification and localization of a sea urchin Notch homologue: insights into
A;Reference number: Z20966; MUID:97454256; PMID:9310331
A;Accession: T31070
A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Molecule type: mRNA
A;Residues: 1-2531 <SHE>
A;Cross-references: EMBL:AF000634; NID:g2570350; PID:g2570351; PIDN:AAB82088.1
C;Superfamily: notch protein; ankyrin repeat homology; EGF homology

  Query Match             15.1%;  Score 75;  DB 2;  Length 2531;
  Best Local Similarity   29.9%;  Pred. No. 9.7;
  Matches   23;  Conservative    8;  Mismatches   32;  Indels   14;  Gaps    5;

Qy          3 ITGACERDVQCGAGTCCAI--SLWLRGLRMCTPLGREGEECHPGSHKVPFFRKRKHHTCP 60
              :   |: :  |  |  | :  |||      |||    || |   :| |         : |
Db        120 VDNVCKLEEPCQNGGTCRLTTSLWDYEC-FCTP-ANTGENCTDDNHCV---------SNP 168

Qy         61 CLPNLLCSRFPDGRYRC 77
              ||   :|:   || | |
Db        169 CLNGAVCTSSSDG-YSC 184


RESULT 6
XLHU
colipase precursor [validated] - human
N;Alternate names: procolipase
C;Species: Homo sapiens (man)
C;Date: 04-Dec-1986 #sequence_revision 19-May-1995 #text_change 09-Jul-2004
C;Accession: A42568; A33949; A03163
R;Sims, H.F.; Lowe, M.E.
Biochemistry 31, 7120-7125, 1992
A;Title: The human colipase gene: isolation, chromosomal location, and tissue-specific e
A;Reference number: A42568; MUID:92353041; PMID:1643046
A;Accession: A42568
A;Molecule type: DNA
A;Residues: 1-112 <SIM>
A;Cross-references: UNIPROT:P04118; GB:M95529; NID:g180842; PIDN:AAB05818.1; PID:g148362
A;Note: sequence extracted from NCBI backbone (NCBIN:110576, NCBIN:110578, NCBIP:110580)
R;Lowe, M.E.; Rosenblum, J.L.; McEwen, P.; Strauss, A.W.
Biochemistry 29, 823-828, 1990
A;Title: Cloning and characterization of the human colipase cDNA.
A;Reference number: A33949; MUID:90248429; PMID:2337598
A;Accession: A33949
A;Molecule type: mRNA
A;Residues: 1-112 <LOW>
A;Cross-references: GB:J02883; NID:g180885; PIDN:AAA52054.1; PID:g180886
A;Note: evidence of partial N-glycosylation, possibly at Asn-43
R;Sternby, B.; Engstrom, A.; Hellman, U.; Vihert, A.M.; Sternby, N.H.; Borgstrom, B.
Biochim. Biophys. Acta 784, 75-80, 1984
A;Title: The primary sequence of human pancreatic colipase.
A;Reference number: A90652; MUID:84104937; PMID:6691986
A;Accession: A03163
A;Molecule type: protein
A;Residues: 23-108 <STE>
C;Comment: Colipase, a cofactor of triacylglycerol lipase (EC 3.1.1.3), forms a 1:1 stoi
```

GenCore version 5.1.6

OM protein - protein search, using sw model

Run on: November 7, 2005, 20:47:46 ; Search time 117.413 Seconds
(without alignments)
375.076 Million cell updates/sec

Title: US-10-811-328-3
Perfect score: 498
Sequence: 1 AVITGACERDVQCGAGTCCA.....CSRFPDGRYRCSMDLKNINF 86

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 1612378 seqs, 512079187 residues

Total number of hits satisfying chosen parameters: 1612378

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : UniProt_03:*
1: uniprot_sprot:*
2: uniprot_trembl:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1	498	100.0	105	1	PRK1_HUMAN	P58294 homo sapien
2	497	99.8	105	2	Q8TC69	Q8tc69 homo sapien
3	473	95.0	105	1	PRK1_RAT	Q8r414 rattus norv
4	432	86.7	81	2	Q8K457	Q8k457 mus musculu
5	310.5	62.3	81	1	VPRA_DENPO	P25687 dendroaspis
6	304	61.0	108	2	Q863H4	Q863h4 bos taurus
7	286	57.4	107	1	PRK2_RAT	Q8r413 rattus norv
8	284	57.0	128	2	Q863H5	Q863h5 bos taurus
9	278.5	55.9	96	2	Q8JFQ0	Q8jfq0 bombina max
10	270.5	54.3	129	1	PRK2_HUMAN	Q9hc23 homo sapien
11	267.5	53.7	96	1	BV8_BOMVA	Q9pw66 bombina var
12	265.5	53.3	128	1	PRK2_MOUSE	Q9qxu7 mus musculu
13	265.5	53.3	128	2	Q6V8J7	Q6v8j7 rattus norv
14	254.5	51.1	96	2	Q8JFE6	Q8jfe6 bombina max
15	253.5	50.9	96	2	Q8JFX8	Q8jfx8 bombina max
16	253.5	50.9	96	2	Q8JFY1	Q8jfy1 bombina max
17	249.5	50.1	96	2	Q8JFX9	Q8jfx9 bombina max
18	249.5	50.1	96	2	Q8JFY0	Q8jfy0 bombina max
19	246.5	49.5	96	2	Q8JFY2	Q8jfy2 bombina max
20	112	22.5	96	2	Q8UUX3	Q8uux3 gallus gall
21	108.5	21.8	221	2	Q8VEJ3	Q8vej3 mus musculu
22	107.5	21.6	224	1	DKK4_HUMAN	Q9ubt3 homo sapien
23	107.5	21.6	350	1	DKK3_CHICK	Q90839 gallus gall
24	104	20.9	255	2	Q9DDA4	Q9dda4 xenopus lae
25	102	20.5	259	1	DKK2_HUMAN	Q9ubu2 homo sapien
26	101	20.3	259	1	DKK2_MOUSE	Q9qyz8 mus musculu
27	101	20.3	259	2	Q8BFW0	Q8bfw0 m mus muscu
28	101	20.3	272	1	DKK1_MOUSE	O54908 mus musculu
29	101	20.3	272	2	Q80UL5	Q80ul5 mus musculu
30	100.5	20.2	171	2	O43532	O43532 homo sapien
31	100.5	20.2	215	2	Q8N294	Q8n294 homo sapien
32	100.5	20.2	350	1	DKK3_HUMAN	Q9ubp4 homo sapien
33	99.5	20.0	277	2	Q9ES33	Q9es33 rattus norv
34	98.5	19.8	349	1	DKK3_MOUSE	Q9qun9 mus musculu
35	97	19.5	266	1	DKK1_HUMAN	O94907 homo sapien
36	96.5	19.4	268	2	Q6PVU5	Q6pvu5 oryctolagus
37	95.5	19.2	259	2	O57464	O57464 xenopus lae
38	94.5	19.0	350	2	Q6PQ81	Q6pq81 homo sapien
39	94	18.9	240	2	Q9PWH3	Q9pwh3 brachydanio
40	88.5	17.8	640	2	Q96397	Q96397 chlamydomon
41	86	17.3	241	2	Q9W6D9	Q9w6d9 brachydanio
42	82.5	16.6	425	1	CND0_MOUSE	Q8bu04 mus musculu
43	82.5	16.6	425	2	Q642A8	Q642a8 rattus norv
44	81.5	16.4	446	2	Q8NB03	Q8nb03 homo sapien
45	81	16.3	1964	1	NTC4_MOUSE	P31695 mus musculu

ALIGNMENTS

RESULT 1
PRK1_HUMAN
ID PRK1_HUMAN STANDARD; PRT; 105 AA.
AC P58294;
DT 16-OCT-2001 (Rel. 40, Created)
DT 16-OCT-2001 (Rel. 40, Last sequence update)
DT 25-JAN-2005 (Rel. 46, Last annotation update)
DE Prokineticin 1 precursor (Endocrine-gland-derived vascular endothelial
DE growth factor) (EG-VEGF) (Mambakine) (UNQ600/PRO1186).
GN Name=PROK1;
OS Homo sapiens (Human).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX NCBI_TaxID=9606;
RN [1]
RP SEQUENCE FROM N.A.
RX MEDLINE=21160229; PubMed=11259612;
RA Li M., Bullock C.M., Knauer D.J., Ehlert F.J., Zhou Q.Y.;
RT "Identification of two prokineticin cDNAs: recombinant proteins
RT potently contract gastrointestinal smooth muscle.";
RL Mol. Pharmacol. 59:692-698(2001).
RN [2]
RP SEQUENCE FROM N.A.
RX MEDLINE=21419730; PubMed=11528470; DOI=10.1038/35091000;
RA LeCouter J., Kowalski J., Foster J., Hass P., Zhang Z.,
RA Dillard-Telm L., Frantz G., Rangell L., DeGuzman L., Keller G.-A.,
RA Peale F., Gurney A., Hillan K.J., Ferrara N.;
RT "Identification of an angiogenic mitogen selective for endocrine gland
RT endothelium.";
RL Nature 412:877-884(2001).
RN [3]
RP SEQUENCE FROM N.A.
RA Fraser C.;
RT "Mambakine, a snake venom related endocrine hormone that controls
RT macrophages.";
RL Submitted (APR-2001) to the EMBL/GenBank/DDBJ databases.
RN [4]
RP SEQUENCE FROM N.A.
RX MEDLINE=22887296; PubMed=12975309; DOI=10.1101/gr.1293003;
RA Clark H.F., Gurney A.L., Abaya E., Baker K., Baldwin D., Brush J.,
RA Chen J., Chow B., Chui C., Crowley C., Currell B., Deuel B., Dowd P.,
RA Eaton D., Foster J., Grimaldi C., Gu Q., Hass P.E., Heldens S.,
RA Huang A., Kim H.S., Klimowski L., Jin Y., Johnson S., Lee J.,
RA Lewis L., Liao D., Mark M., Robbie E., Sanchez C., Schoenfeld J.,
RA Seshagiri S., Simmons L., Singh J., Smith V., Stinson J., Vagts A.,
RA Vandlen R., Watanabe C., Wieand D., Woods K., Xie M.-H., Yansura D.,
RA Yi S., Yu G., Yuan J., Zhang M., Zhang Z., Goddard A., Wood W.I.,
RA Godowski P., Gray A.;
RT "The secreted protein discovery initiative (SPDI), a large-scale
RT effort to identify novel human secreted and transmembrane proteins: a
RT bioinformatics assessment.";
RL Genome Res. 13:2265-2270(2003).
RN [5]
RP SEQUENCE OF 20-34.

```
RX   PubMed=15340161; DOI=10.1110/ps.04682504;
RA   Zhang Z., Henzel W.J.;
RT   "Signal peptide prediction based on analysis of experimentally
RT   verified cleavage sites.";
RL   Protein Sci. 13:2819-2824(2004).
CC   -!- FUNCTION: Potently contract gastrointestinal (GI) smooth muscle.
CC       Induces proliferation, migration and fenestration (the formation
CC       of membrane discontinuities) in capillary endothelial cells
CC       derived from endocrine glands. Has little or no effect on a
CC       variety of other endothelial and non-endothelial cell types.
CC   -!- SUBCELLULAR LOCATION: Secreted.
CC   -!- TISSUE SPECIFICITY: Expressed in the steroidogenic glands, ovary,
CC       testis, adrenal and placenta.
CC   -!- SIMILARITY: Belongs to the prokinecitin family.
CC   ---------------------------------------------------------------------
CC   This SWISS-PROT entry is copyright. It is produced through a collaboration
CC   between the Swiss Institute of Bioinformatics and the EMBL outstation -
CC   the European Bioinformatics Institute. There are no restrictions on its
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CC   entities requires a license agreement (See http://www.isb-sib.ch/announce/
CC   or send an email to license@isb-sib.ch).
CC   ---------------------------------------------------------------------
DR   EMBL; AF333024; AAK49918.1; -.
DR   EMBL; AY029225; AAK33111.1; -.
DR   EMBL; AY358683; AAQ89046.1; -.
DR   HSSP; P25687; 1IMT.
DR   Genew; HGNC:18454; PROK1.
DR   H-InvDB; HIX0000868; -.
DR   MIM; 606233; -.
DR   InterPro; IPR009523; Prokineticin.
DR   Pfam; PF06607; Prokineticin; 1.
KW   Direct protein sequencing; Growth factor; Mitogen; Signal.
FT   SIGNAL        1     19
FT   CHAIN        20    105       Prokineticin 1.
FT   DISULFID     26     38       By similarity.
FT   DISULFID     32     50       By similarity.
FT   DISULFID     37     78       By similarity.
FT   DISULFID     60     86       By similarity.
FT   DISULFID     80     96       By similarity.
SQ   SEQUENCE   105 AA;  11715 MW;  C7E3FDE30EFB416A CRC64;

  Query Match             100.0%;  Score 498;  DB 1;  Length 105;
  Best Local Similarity   100.0%;  Pred. No. 4.8e-45;
  Matches   86;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 AVITGACERDVQCGAGTCCAISLWLRGLRMCTPLGREGEECHPGSHKVPFFRKRKHHTCP 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         20 AVITGACERDVQCGAGTCCAISLWLRGLRMCTPLGREGEECHPGSHKVPFFRKRKHHTCP 79

Qy         61 CLPNLLCSRFPDGRYRCSMDLKNINF 86
              ||||||||||||||||||||||||||
Db         80 CLPNLLCSRFPDGRYRCSMDLKNINF 105


RESULT 2
Q8TC69
ID   Q8TC69      PRELIMINARY;      PRT;   105 AA.
AC   Q8TC69;
DT   01-JUN-2002 (TrEMBLrel. 21, Created)
DT   01-JUN-2002 (TrEMBLrel. 21, Last sequence update)
DT   01-MAR-2004 (TrEMBLrel. 26, Last annotation update)
DE   Prokineticin 1.
GN   Name=PROK1;
OS   Homo sapiens (Human).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX   NCBI_TaxID=9606;
RN   [1]
RP   SEQUENCE FROM N.A.
RC   TISSUE=Testis;
RX   MEDLINE=22388257; PubMed=12477932; DOI=10.1073/pnas.242603899;
RA   Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,
RA   Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,
RA   Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
RA   Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
RA   Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
RA   Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,
RA   Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,
RA   Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,
RA   Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,
RA   Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
RA   Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
RA   Fahey J., Helton E., Ketteman M., Madan A., Rodrigues S., Sanchez A.,
RA   Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,
RA   Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,
RA   Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M., Butterfield Y.S.,
RA   Krzywinski M.I., Skalska U., Smailus D.E., Schnerch A., Schein J.E.,
RA   Jones S.J., Marra M.A.;
RT   "Generation and initial analysis of more than 15,000 full-length human
RT   and mouse cDNA sequences.";
RL   Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).
RN   [2]
RP   SEQUENCE FROM N.A.
RC   TISSUE=Testis;
RA   Strausberg R.;
RL   Submitted (MAR-2002) to the EMBL/GenBank/DDBJ databases.
DR   EMBL; BC025399; AAH25399.1; -.
DR   HSSP; P25687; 1IMT.
DR   InterPro; IPR009523; Prokineticin.
DR   Pfam; PF06607; Prokineticin; 1.
SQ   SEQUENCE   105 AA;  11729 MW;  E570FDE30EFB52D2 CRC64;

  Query Match             99.8%;  Score 497;  DB 2;  Length 105;
  Best Local Similarity   98.8%;  Pred. No. 6.1e-45;
  Matches   85;  Conservative    1;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 AVITGACERDVQCGAGTCCAISLWLRGLRMCTPLGREGEECHPGSHKVPFFRKRKHHTCP 60
              |||||||||||||||||||||||||||||||||||||||||||||||:||||||||||||
Db         20 AVITGACERDVQCGAGTCCAISLWLRGLRMCTPLGREGEECHPGSHKIPFFRKRKHHTCP 79

Qy         61 CLPNLLCSRFPDGRYRCSMDLKNINF 86
              ||||||||||||||||||||||||||
Db         80 CLPNLLCSRFPDGRYRCSMDLKNINF 105


RESULT 3
PRK1_RAT
ID   PRK1_RAT       STANDARD;      PRT;   105 AA.
AC   Q8R414;
DT   10-OCT-2003 (Rel. 42, Created)
DT   10-OCT-2003 (Rel. 42, Last sequence update)
DT   05-JUL-2004 (Rel. 44, Last annotation update)
DE   Prokineticin 1 precursor (Endocrine-gland-derived vascular endothelial
DE   growth factor) (EG-VEGF).
GN   Name=Prok1;
OS   Rattus norvegicus (Rat).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
OX   NCBI_TaxID=10116;
RN   [1]
RP   SEQUENCE FROM N.A.
RC   STRAIN=Sprague-Dawley;
RX   MEDLINE=22050031; PubMed=12054613; DOI=10.1016/S0006-291X(02)00239-5;
RA   Masuda Y., Takatsu Y., Terao Y., Kumano S., Ishibashi Y., Suenaga M.,
RA   Abe M., Fukusumi S., Watanabe T., Shintani Y., Yamada T., Hinuma S.,
RA   Inatomi N., Ohtaki T., Onda H., Fujino M.;
RT   "Isolation and identification of EG-VEGF/prokineticins as cognate
RT   ligands for two orphan G-protein-coupled receptors.";
RL   Biochem. Biophys. Res. Commun. 293:396-402(2002).
CC   -!- FUNCTION: Potently contract gastrointestinal (GI) smooth muscle.
CC       Induces proliferation, migration and fenestration (the formation
CC       of membrane discontinuities) in capillary endothelial cells
CC       derived from endocrine glands. Has little or no effect on a
CC       variety of other endothelial and non-endothelial cell types (By
CC       similarity).
```

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CC   -!- SUBCELLULAR LOCATION: Secreted (By similarity).
CC   -!- SIMILARITY: Belongs to the prokinecitin family.
CC   ---------------------------------------------------------------------
CC   This SWISS-PROT entry is copyright. It is produced through a collaboration
CC   between the Swiss Institute of Bioinformatics and the EMBL outstation -
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CC   entities requires a license agreement (See http://www.isb-sib.ch/announce/
CC   or send an email to license@isb-sib.ch).
CC   ---------------------------------------------------------------------
DR   EMBL; AY089983; AAM09104.1; -.
DR   HSSP; P25687; 1IMT.
DR   RGD; 620898; Prok1.
DR   InterPro; IPR009523; Prokineticin.
DR   Pfam; PF06607; Prokineticin; 1.
KW   Growth factor; Mitogen; Signal.
FT   SIGNAL        1     19       Potential.
FT   CHAIN        20    105       Prokineticin 1.
FT   DISULFID     26     38       By similarity.
FT   DISULFID     32     50       By similarity.
FT   DISULFID     37     78       By similarity.
FT   DISULFID     60     86       By similarity.
FT   DISULFID     80     96       By similarity.
SQ   SEQUENCE   105 AA;  11642 MW;  8DF0C42122B1C5B6 CRC64;

  Query Match             95.0%;  Score 473;  DB 1;  Length 105;
  Best Local Similarity   91.9%;  Pred. No. 2.1e-42;
  Matches   79;  Conservative    5;  Mismatches    2;  Indels    0;  Gaps    0;

Qy          1 AVITGACERDVQCGAGTCCAISLWLRGLRMCTPLGREGEECHPGSHKVPFFRKRKHHTCP 60
              |||||||||||||||||||||||||||||:||||||||||||||||||:||||||:|||||
Db         20 AVITGACERDVQCGAGTCCAISLWLRGLRLCTPLGREGEECHPGSHKIPFFRKRQHHTCP 79

Qy         61 CLPNLLCSRFPDGRYRCSMDLKNINF 86
              | |:|||||||||||||| ||||:||
Db         80 CSPSLLCSRFPDGRYRCSQDLKNVNF 105


RESULT 4
Q8K457
ID   Q8K457      PRELIMINARY;      PRT;    81 AA.
AC   Q8K457;
DT   01-OCT-2002 (TrEMBLrel. 22, Created)
DT   01-OCT-2002 (TrEMBLrel. 22, Last sequence update)
DT   01-MAR-2004 (TrEMBLrel. 26, Last annotation update)
DE   Prokineticin 1 (Fragment).
GN   Name=Prok1; Synonyms=Pk1;
OS   Mus musculus (Mouse).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX   NCBI_TaxID=10090;
RN   [1]
RP   SEQUENCE FROM N.A.
RC   STRAIN=C57BL/6;
RX   MEDLINE=22022134; PubMed=12024206; DOI=10.1038/417405a;
RA   Cheng M.Y., Bullock C.M., Li C., Lee A.G., Bermak J.C., Belluzzi J.,
RA   Weaver D.R., Leslie F.M., Zhou Q.Y.;
RT   "Prokineticin 2 transmits the behavioural circadian rhythm of the
RT   suprachiasmatic nucleus.";
RL   Nature 417:405-410(2002).
DR   EMBL; AF487281; AAM49573.1; -.
DR   HSSP; P25687; 1IMT.
DR   MGD; MGI:2180370; Prok1.
DR   GO; GO:0005576; C:extracellular; IDA.
DR   GO; GO:0000187; P:activation of MAPK; IDA.
DR   GO; GO:0007623; P:circadian rhythm; TAS.
DR   GO; GO:0008284; P:positive regulation of cell proliferation; IDA.
DR   GO; GO:0045765; P:regulation of angiogenesis; IDA.
DR   InterPro; IPR009523; Prokineticin.
DR   Pfam; PF06607; Prokineticin; 1.
FT   NON_TER       1      1
SQ   SEQUENCE   81 AA;  9192 MW;  7BBE3EC6B16A8011 CRC64;

  Query Match             86.7%;  Score 432;  DB 2;  Length 81;
  Best Local Similarity   87.7%;  Pred. No. 3.5e-38;
  Matches   71;  Conservative    5;  Mismatches    5;  Indels    0;  Gaps    0;

Qy          6 ACERDVQCGAGTCCAISLWLRGLRMCTPLGREGEECHPGSHKVPFFRKRKHHTCPCLPNL 65
              |||||:|||||||||||||||||:||||||||||||||||:|| |||:|||||| |:|
Db          1 ACERDIQCGAGTCCAISLWLRGLRLCTPLGREGEECHPGSHKIPFLRKRQHHTCPCSPSL 60

Qy         66 LCSRFPDGRYRCSMDLKNINF 86
              |||||||||||  |||| ||
Db         61 LCSRFPDGRYRCFRDLKNANF 81


RESULT 5
VPRA_DENPO
ID   VPRA_DENPO     STANDARD;      PRT;    81 AA.
AC   P25687;
DT   01-MAY-1992 (Rel. 22, Created)
DT   30-MAY-2000 (Rel. 39, Last sequence update)
DT   25-OCT-2004 (Rel. 45, Last annotation update)
DE   Intestinal toxin 1 (MIT 1) (MIT1) (Venom protein A).
OS   Dendroaspis polylepis polylepis (Black mamba).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Lepidosauria; Squamata; Scleroglossa; Serpentes; Colubroidea;
OC   Elapidae; Elapinae; Dendroaspis.
OX   NCBI_TaxID=8620;
RN   [1]
RP   SEQUENCE.
RC   TISSUE=Venom;
RX   MEDLINE=81115818; PubMed=7461607;
RA   Joubert F.J., Strydom D.J.;
RT   "Snake venom. The amino acid sequence of protein A from Dendroaspis
RT   polylepis polylepis (black mamba) venom.";
RL   Hoppe-Seyler's Z. Physiol. Chem. 361:1787-1794(1980).
RN   [2]
RP   CHARACTERIZATION.
RX   MEDLINE=20036442; PubMed=10567694; DOI=10.1016/S0014-5793(99)01459-3;
RA   Schweitz H., Pascaud P., Diochot S., Moinier D., Lazdunski M.;
RT   "MIT1, a black mamba toxin with a new and highly potent activity on
RT   intestinal contraction.";
RL   FEBS Lett. 461:183-188(1998).
RN   [3]
RP   STRUCTURE BY NMR.
RC   TISSUE=Venom;
RX   MEDLINE=98437381; PubMed=9761684; DOI=10.1006/jmbi.1998.2057;
RA   Boisbouvier J., Albrand J.-P., Blackledge M., Jaquinod M.,
RA   Schweitz H., Lazdunski M., Marion D.;
RT   "A structural homologue of colipase in black mamba venom revealed by
RT   NMR floating disulphide bridge analysis.";
RL   J. Mol. Biol. 283:205-219(1998).
CC   -!- FUNCTION: Potently contract gastrointestinal (GI) smooth muscle.
CC   -!- SUBCELLULAR LOCATION: Secreted.
CC   -!- SIMILARITY: Belongs to the prokinecitin family.
DR   PDB; 1IMT; NMR; @=1-81.
DR   InterPro; IPR009523; Prokineticin.
DR   Pfam; PF06607; Prokineticin; 1.
KW   3D-structure; Direct protein sequencing; Toxin.
FT   DISULFID      7     19
FT   DISULFID     13     31
FT   DISULFID     18     60
FT   DISULFID     41     68
FT   DISULFID     62     78
FT   VARIANT      73     73       P -> Q (in protein A').
FT   CONFLICT     18     18       C -> S (in Ref. 1).
FT   CONFLICT     22     22       S -> C (in Ref. 1).
SQ   SEQUENCE   81 AA;  8645 MW;  6C01368841572044 CRC64;

  Query Match             62.3%;  Score 310.5;  DB 1;  Length 81;
  Best Local Similarity   62.8%;  Pred. No. 2.4e-25;
  Matches   49;  Conservative   14;  Mismatches   14;  Indels    1;  Gaps    1;

Qy          1 AVITGACERDVQCGAGTCCAISLWLRGLRMCTPLGREGEECHPGSHKVPFFRKRK-HHTC 59
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              ||||||||||:||| |||||:|||:: :|:|||:|  ||:||| |||:||  :|| ||||
Db          1 AVITGACERDLQCGKGTCCAVSLWIKSVRVCTPVGTSGEDCHPASHKIPFSGQRKMHHTC 60

Qy         60 PCLPNLLCSRFPDGRYRC 77
              || ||| | :    :::|
Db         61 PCAPNLACVQTSPKKFKC 78


RESULT 6
Q863H4
ID   Q863H4      PRELIMINARY;      PRT;   108 AA.
AC   Q863H4;
DT   01-JUN-2003 (TrEMBLrel. 24, Created)
DT   01-JUN-2003 (TrEMBLrel. 24, Last sequence update)
DT   01-MAR-2004 (TrEMBLrel. 26, Last annotation update)
DE   Bv8/prokineticin 2-like protein splice variant.
OS   Bos taurus (Bovine).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovidae;
OC   Bovinae; Bos.
OX   NCBI_TaxID=9913;
RN   [1]
RP   SEQUENCE FROM N.A.
RC   TISSUE=Testis;
RX   MEDLINE=22612805; PubMed=12728244; DOI=10.1038/sj.embor.embor830;
RA   Kaser A., Winklmayr M., Lepperdinger G., Kreil G.;
RT   "The AVIT protein family.";
RL   EMBO Rep. 4:469-473(2003).
DR   EMBL; AY192558; AAP31907.1; -.
DR   HSSP; P25687; 1IMT.
DR   InterPro; IPR009523; Prokineticin.
DR   Pfam; PF06607; Prokineticin; 1.
SQ   SEQUENCE   108 AA;  11672 MW;  C00410399A9B215E CRC64;

  Query Match             61.0%;  Score 304;  DB 2;  Length 108;
  Best Local Similarity   62.3%;  Pred. No. 1.6e-24;
  Matches   48;  Conservative   11;  Mismatches   18;  Indels    0;  Gaps    0;

Qy          1 AVITGACERDVQCGAGTCCAISLWLRGLRMCTPLGREGEECHPGSHKVPFFRKRKHHTCP 60
              |||||||:|| ||| | |||:|||:: :|:|||:|: |: ||| : ||||  :| |||||
Db         28 AVITGACDRDPQCGGGMCCAVSLWVKSIRICTPMGKVGDSCHPMTRKVPFLGRRMHHTCP 87

Qy         61 CLPNLLCSRFPDGRYRC 77
              ||| | |||    || |
Db         88 CLPGLACSRTSFNRYTC 104


RESULT 7
PRK2_RAT
ID   PRK2_RAT       STANDARD;      PRT;   107 AA.
AC   Q8R413;
DT   28-FEB-2003 (Rel. 41, Created)
DT   28-FEB-2003 (Rel. 41, Last sequence update)
DT   05-JUL-2004 (Rel. 44, Last annotation update)
DE   Prokineticin 2 precursor (PK2).
GN   Name=Prok2; Synonyms=Bv8;
OS   Rattus norvegicus (Rat).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
OX   NCBI_TaxID=10116;
RN   [1]
RP   SEQUENCE FROM N.A.
RC   STRAIN=Sprague-Dawley;
RX   MEDLINE=22050031; PubMed=12054613; DOI=10.1016/S0006-291X(02)00239-5;
RA   Masuda Y., Takatsu Y., Terao Y., Kumano S., Ishibashi Y., Suenaga M.,
RA   Abe M., Fukusumi S., Watanabe T., Shintani Y., Yamada T., Hinuma S.,
RA   Inatomi N., Ohtaki T., Onda H., Fujino M.;
RT   "Isolation and identification of EG-VEGF/prokineticins as cognate
RT   ligands for two orphan G-protein-coupled receptors.";
RL   Biochem. Biophys. Res. Commun. 293:396-402(2002).
RN   [2]
RP   EFFECT ON CIRCADIAN LOCOMOTOR ACTIVITY.
RX   MEDLINE=22022134; PubMed=12024206; DOI=10.1038/417405a;
RA   Cheng M.Y., Bullock C.M., Li C., Lee A.G., Bermak J.C., Belluzzi J.,
RA   Weaver D.R., Leslie F.M., Zhou Q.-Y.;
RT   "Prokineticin 2 transmits the behavioural circadian rhythm of the
RT   suprachiasmatic nucleus.";
RL   Nature 417:405-410(2002).
CC   -!- FUNCTION: May function as an output molecule from the
CC       suprachiasmatic nucleus (SCN) that transmits behavioral circadian
CC       rhythm. May also function locally within the SCN to synchronize
CC       output. Potently contracts gastrointestinal (GI) smooth muscle (By
CC       similarity).
CC   -!- SUBCELLULAR LOCATION: Secreted (By similarity).
CC   -!- TISSUE SPECIFICITY: Expressed at high levels in testis and at
CC       lower levels in brain, lung, ovary, spleen, thymus and uterus.
CC   -!- INDUCTION: Activated by CLOCK and BMAL1 heterodimers and light;
CC       inhibited by period genes (PER1, PER2 and PER3) and cryptochrome
CC       genes (CRY1 and CRY2) (Probable).
CC   -!- SIMILARITY: Belongs to the prokinecitin family.
CC   ---------------------------------------------------------------------
CC   This SWISS-PROT entry is copyright. It is produced through a collaboration
CC   between the Swiss Institute of Bioinformatics and the EMBL outstation -
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CC   or send an email to license@isb-sib.ch).
CC   ---------------------------------------------------------------------
DR   EMBL; AY089984; AAM09105.1; -.
DR   HSSP; P25687; 1IMT.
DR   RGD; 620280; Bv8.
DR   InterPro; IPR009523; Prokineticin.
DR   Pfam; PF06607; Prokineticin; 1.
KW   Biological rhythms; Neuropeptide; Signal.
FT   SIGNAL       1     26       Potential.
FT   CHAIN       27    107       Prokineticin 2.
FT   DISULFID    33     45       By similarity.
FT   DISULFID    39     57       By similarity.
FT   DISULFID    44     85       By similarity.
FT   DISULFID    67     93       By similarity.
FT   DISULFID    87    103       By similarity.
SQ   SEQUENCE   107 AA;  11594 MW;  BDFF316CDCB5FED0 CRC64;

  Query Match             57.4%;  Score 286;  DB 1;  Length 107;
  Best Local Similarity   57.1%;  Pred. No. 1.2e-22;
  Matches   44;  Conservative   15;  Mismatches   18;  Indels    0;  Gaps    0;

Qy          1 AVITGACERDVQCGAGTCCAISLWLRGLRMCTPLGREGEECHPGSHKVPFFRKRKHHTCP 60
              |||||||::| ||| | |||:|:|:: :|:|||:|: |: ||| : |||| :| |||||
Db         27 AVITGACDKDSQCGGGMCCAVSIWVKSIRICTPMGQVGDSCHPLTRKVPFWGRRMHHTCP 86

Qy         61 CLPNLLCSRFPDGRYRC 77
              ||| | | |    |: |
Db         87 CLPGLACLRTSFNRFIC 103


RESULT 8
Q863H5
ID   Q863H5      PRELIMINARY;      PRT;   128 AA.
AC   Q863H5;
DT   01-JUN-2003 (TrEMBLrel. 24, Created)
DT   01-JUN-2003 (TrEMBLrel. 24, Last sequence update)
DT   01-MAR-2004 (TrEMBLrel. 26, Last annotation update)
DE   Bv8/prokineticin 2-like protein.
OS   Bos taurus (Bovine).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovidae;
OC   Bovinae; Bos.
OX   NCBI_TaxID=9913;
RN   [1]
RP   SEQUENCE FROM N.A.
RC   TISSUE=Testis;
RX   MEDLINE=22612805; PubMed=12728244; DOI=10.1038/sj.embor.embor830;
RA   Kaser A., Winklmayr M., Lepperdinger G., Kreil G.;
RT   "The AVIT protein family.";
```

```
RL   EMBO Rep. 4:469-473(2003).
DR   EMBL; AY192557; AAP31906.1; -.
DR   HSSP; P25687; 1IMT.
DR   GO; GO:0005576; C:extracellular; ISS.
DR   GO; GO:0001664; F:G-protein-coupled receptor binding; ISS.
DR   GO; GO:0000187; P:activation of MAPK; ISS.
DR   GO; GO:0001525; P:angiogenesis; ISS.
DR   GO; GO:0006916; P:anti-apoptosis; ISS.
DR   GO; GO:0008283; P:cell proliferation; ISS.
DR   GO; GO:0006935; P:chemotaxis; ISS.
DR   GO; GO:0007204; P:cytosolic calcium ion concentration elevation; ISS.
DR   GO; GO:0007186; P:G-protein coupled receptor protein signalin. . .; ISS.
DR   GO; GO:0006954; P:inflammatory response; ISS.
DR   GO; GO:0019233; P:perception of pain; ISS.
DR   GO; GO:0045987; P:positive regulation of smooth muscle contra. . .; ISS.
DR   GO; GO:0007283; P:spermatogenesis; ISS.
DR   InterPro; IPR009523; Prokineticin.
DR   Pfam; PF06607; Prokineticin; 1.
SQ   SEQUENCE   128 AA;  14290 MW;  C22CDBDBE40483EC CRC64;

  Query Match             57.0%;  Score 284;  DB 2;  Length 128;
  Best Local Similarity   49.5%;  Pred. No. 2.4e-22;
  Matches   48;  Conservative   11;  Mismatches   18;  Indels   20;  Gaps    1;

Qy          1 AVITGACERDVQCGAGTCCAISLWLRGLRMCTPLGREGEECHPGSH---------------- 46
              |||||||:|| ||| | |||:|||:: :|:|||:|: |: ||| :
Db         28 AVITGACDRDPQCGGGMCCAVSLWVKSIRICTPMGKVGDSCHPMTRKNHFGNGRQERRKR 87

Qy         47 ------KVPFFRKRKHHTCPCLPNLLCSRFPDGRYRC 77
                  ||||  :| ||||||||  | |||     || |
Db         88 KRRRKKKVPFLGRRMHHTCPCLPGLACSRTSFNRYTC 124


RESULT 9
Q8JFQ0
ID   Q8JFQ0      PRELIMINARY;      PRT;    96 AA.
AC   Q8JFQ0;
DT   01-OCT-2002 (TrEMBLrel. 22, Created)
DT   01-OCT-2002 (TrEMBLrel. 22, Last sequence update)
DT   01-MAR-2004 (TrEMBLrel. 26, Last annotation update)
DE   Bv8 protein homolog 2.
OS   Bombina maxima (Giant fire-bellied toad) (Chinese red belly toad).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Amphibia; Batrachia; Anura; Archeobatrachia; Bombinatoridae; Bombina.
OX   NCBI_TaxID=161274;
RN   [1]
RP   SEQUENCE FROM N.A.
RC   TISSUE=Skin secretions;
RX   MEDLINE=22515712; PubMed=12628381; DOI=10.1016/S1096-4959(02)00294-4;
RA   Lai R., Liu H., Lee W.H., Zhang Y.;
RT   "Two novel Bv8-like peptides from skin secretions of the toad Bombina
RT   maxima.";
RL   Comp. Biochem. Physiol. B, Biochem. Mol. Biol. 134:509-514(2003).
DR   EMBL; AF411091; AAN03822.1; -.
DR   HSSP; P25687; 1IMT.
DR   InterPro; IPR009523; Prokineticin.
DR   Pfam; PF06607; Prokineticin; 1.
SQ   SEQUENCE   96 AA;  10198 MW;  EC4EAA5EFE49B2F0 CRC64;

  Query Match             55.9%;  Score 278.5;  DB 2;  Length 96;
  Best Local Similarity   61.5%;  Pred. No. 6.9e-22;
  Matches   48;  Conservative    9;  Mismatches   20;  Indels    1;  Gaps    1;

Qy          1 AVITGACERDVQCGAGTCCAISLWLRGLRMCTPLGREGEECHPGSHKVPFFRKRKHHTCP 60
              |||||||:||||||:||||| ||| | :| | |||  |||||| |||||:  ||     ||
Db         20 AVITGACDRDVQCGSGTCCAASLWSRNIRFCVPLGNNGEECHPASHKVPYNGKRLSSLCP 79

Qy         61 CLPNLLCSRFPDGRYRCS 78
              |   | ||:  : :::||
Db         80 CKSGLTCSKSGE-KFQCS 96


RESULT 10
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PRK2_HUMAN
ID   PRK2_HUMAN      STANDARD;      PRT;   129 AA.
AC   Q9HC23;
DT   16-OCT-2001 (Rel. 40, Created)
DT   16-OCT-2001 (Rel. 40, Last sequence update)
DT   25-JAN-2005 (Rel. 46, Last annotation update)
DE   Prokineticin 2 precursor (PK2) (Protein Bv8 homolog).
GN   Name=PROK2; Synonyms=BV8;
OS   Homo sapiens (Human).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX   NCBI_TaxID=9606;
RN   [1]
RP   SEQUENCE OF 5-129 FROM N.A. (ISOFORM 1).
RC   TISSUE=Testis;
RX   MEDLINE=20047850; PubMed=10580115; DOI=10.1016/S0014-5793(99)01473-8;
RA   Wechselberger C., Puglisi R., Lepperdinger G., Boitani C., Kreil G.;
RT   "The mammalian homologue of Bv8 from frog skin is mainly expressed in
RT   spermatocytes.";
RL   FEBS Lett. 462:177-181(1999).
RN   [2]
RP   SEQUENCE FROM N.A. (ISOFORM 2).
RX   MEDLINE=21160229; PubMed=11259612;
RA   Li M., Bullock C.M., Knauer D.J., Ehlert F.J., Zhou Q.-Y.;
RT   "Identification of two prokineticin cDNAs: recombinant proteins
RT   potently contract gastrointestinal smooth muscle.";
RL   Mol. Pharmacol. 59:692-698(2001).
RN   [3]
RP   SEQUENCE OF 28-42.
RX   PubMed=15340161; DOI=10.1110/ps.04682504;
RA   Zhang Z., Henzel W.J.;
RT   "Signal peptide prediction based on analysis of experimentally
RT   verified cleavage sites.";
RL   Protein Sci. 13:2819-2824(2004).
CC   -!- FUNCTION: May function as an output molecule from the
CC       suprachiasmatic nucleus (SCN) that transmits behavioral circadian
CC       rhythm. May also function locally within the SCN to synchronize
CC       output. Potently contracts gastrointestinal (GI) smooth muscle.
CC   -!- SUBCELLULAR LOCATION: Secreted.
CC   -!- ALTERNATIVE PRODUCTS:
CC       Event=Alternative splicing; Named isoforms=2;
CC       Name=1;
CC         IsoId=Q9HC23-1; Sequence=Displayed;
CC       Name=2;
CC         IsoId=Q9HC23-2; Sequence=VSP_005219;
CC   -!- TISSUE SPECIFICITY: Expressed in the testis and, at low levels, in
CC       the small intestine.
CC   -!- INDUCTION: Activated by CLOCK and BMAL1 heterodimers and light;
CC       inhibited by period genes (PER1, PER2 and PER3) and cryptochrome
CC       genes (CRY1 and CRY2) (Probable).
CC   -!- SIMILARITY: Belongs to the prokinecitin family.
CC   ---------------------------------------------------------------------------
CC   This SWISS-PROT entry is copyright. It is produced through a collaboration
CC   between the Swiss Institute of Bioinformatics and the EMBL outstation -
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CC   or send an email to license@isb-sib.ch).
CC   ---------------------------------------------------------------------------
DR   EMBL; AF182069; AAG16893.2; -.
DR   EMBL; AF333025; AAK49919.1; -.
DR   HSSP; P25687; 1IMT.
DR   Genew; HGNC:18455; PROK2.
DR   MIM; 607002; -.
DR   GO; GO:0005576; C:extracellular; TAS.
DR   GO; GO:0001664; F:G-protein-coupled receptor binding; TAS.
DR   GO; GO:0000187; P:activation of MAPK; TAS.
DR   GO; GO:0001525; P:angiogenesis; IDA.
DR   GO; GO:0006916; P:anti-apoptosis; IDA.
DR   GO; GO:0008283; P:cell proliferation; IDA.
DR   GO; GO:0006935; P:chemotaxis; IDA.
DR   GO; GO:0007204; P:cytosolic calcium ion concentration elevation; TAS.
```

```
DR   GO; GO:0007186; P:G-protein coupled receptor protein signalin. . .; NAS.
DR   GO; GO:0006954; P:inflammatory response; NAS.
DR   GO; GO:0019233; P:perception of pain; TAS.
DR   GO; GO:0045987; P:positive regulation of smooth muscle contra. . .; IDA.
DR   GO; GO:0007283; P:spermatogenesis; IMP.
DR   InterPro; IPR009523; Prokineticin.
DR   Pfam; PF06607; Prokineticin; 1.
KW   Alternative splicing; Biological rhythms; Direct protein sequencing;
KW   Neuropeptide; Signal.
FT   SIGNAL       1     27
FT   CHAIN       28    129       Prokineticin 2.
FT   DISULFID    34     46       By similarity.
FT   DISULFID    40     58       By similarity.
FT   DISULFID    45    107       By similarity.
FT   DISULFID    68    115       By similarity.
FT   DISULFID   109    125       By similarity.
FT   VARSPLIC    75     95       Missing (in isoform 2).
FT                               /FTId=VSP_005219.
SQ   SEQUENCE   129 AA;  14314 MW;  0487679E8700DA55 CRC64;

  Query Match             54.3%;  Score 270.5;  DB 1;  Length 129;
  Best Local Similarity   45.9%;  Pred. No. 6.5e-21;
  Matches   45;  Conservative   14;  Mismatches   18;  Indels   21;  Gaps    1;

Qy          1 AVITGACERDVQCGAGTCCAISLWLRGLRMCTPLGREGEECHPGSHK------------ 47
              |||||||::| ||| | |||:|:|:: :|:|||:|: |: ||| : |
Db         28 AVITGACDKDSQCGGGMCCAVSIWVKSIRICTPMGKLGDSCHPLTRKNNFGNGRQERRKR 87

Qy         48 --------VPFFRKRKHHTCPCLPNLLCSRFPDGRYRC 77
                    |||| :| |||||||| | | |    |: |
Db         88 KRSKRKKEVPFFGRRMHHTCPCLPGLACLRTSFNRFIC 125


RESULT 11
BV8_BOMVA
ID   BV8_BOMVA      STANDARD;      PRT;    96 AA.
AC   Q9PW66;
DT   16-OCT-2001 (Rel. 40, Created)
DT   16-OCT-2001 (Rel. 40, Last sequence update)
DT   05-JUL-2004 (Rel. 44, Last annotation update)
DE   Protein Bv8 precursor.
OS   Bombina variegata (Yellow-bellied toad).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Amphibia; Batrachia; Anura; Archeobatrachia; Bombinatoridae; Bombina.
OX   NCBI_TaxID=8348;
RN   [1]
RP   SEQUENCE FROM N.A., AND PARTIAL SEQUENCE.
RC   TISSUE=Skin secretion;
RX   MEDLINE=99349621; PubMed=10422759; DOI=10.1016/S0014-2999(99)00229-0;
RA   Mollay C., Wechselberger C., Mignogna G., Negri L., Melchiorri P.,
RA   Barra D., Kreil G.;
RT   "Bv8, a small protein from frog skin and its homologue from snake
RT   venom induce hyperalgesia in rats.";
RL   Eur. J. Pharmacol. 374:189-196(1999).
CC   -!- FUNCTION: Potently contract gastrointestinal (GI) smooth muscle.
CC       Induces hyperalgesia.
CC   -!- SUBCELLULAR LOCATION: Secreted.
CC   -!- SIMILARITY: Belongs to the prokinecitin family.
CC   ---------------------------------------------------------------------
CC   This SWISS-PROT entry is copyright. It is produced through a collaboration
CC   between the Swiss Institute of Bioinformatics and the EMBL outstation -
CC   the European Bioinformatics Institute. There are no restrictions on its
CC   use by non-profit institutions as long as its content is in no way
CC   modified and this statement is not removed. Usage by and for commercial
CC   entities requires a license agreement (See http://www.isb-sib.ch/announce/
CC   or send an email to license@isb-sib.ch).
CC   ---------------------------------------------------------------------
DR   EMBL; AF168790; AAD45816.1; -.
DR   HSSP; P25687; 1IMT.
DR   InterPro; IPR009523; Prokineticin.
DR   Pfam; PF06607; Prokineticin; 1.
KW   Direct protein sequencing; Signal.
FT   SIGNAL       1     19
FT   CHAIN       20     96       Protein Bv8.
FT   DISULFID    26     38       By similarity.
FT   DISULFID    32     50       By similarity.
FT   DISULFID    37     78       By similarity.
FT   DISULFID    60     86       By similarity.
FT   DISULFID    80     95       By similarity.
SQ   SEQUENCE   96 AA;  10102 MW;  A12490A7437609B4 CRC64;

  Query Match             53.7%;  Score 267.5;  DB 1;  Length 96;
  Best Local Similarity   57.7%;  Pred. No. 1e-20;
  Matches   45;  Conservative   11;  Mismatches   21;  Indels    1;  Gaps    1;

Qy          1 AVITGACERDVQCGAGTCCAISLWLRGLRMCTPLGREGEECHPGSHKVPFFRKRKHHTCP 60
              |||||||::|||||:||||| | | | :| | |||  ||:||| |||||:  ||    ||
Db         20 AVITGACDKDVQCGSGTCCAASAWSRNIRFCIPLGNSGEDCHPASHKVPYDGKRLSSLCP 79

Qy         61 CLPNLLCSRFPDGRYRCS 78
              |   | ||:  : :::||
Db         80 CKSGLTCSKSGE-KFKCS 96


RESULT 12
PRK2_MOUSE
ID   PRK2_MOUSE     STANDARD;      PRT;    128 AA.
AC   Q9QXU7; Q9QXU5; Q9QXU6;
DT   16-OCT-2001 (Rel. 40, Created)
DT   16-OCT-2001 (Rel. 40, Last sequence update)
DT   05-JUL-2004 (Rel. 44, Last annotation update)
DE   Prokineticin 2 precursor (PK2) (Protein Bv8 homolog).
GN   Name=Prok2; Synonyms=Bv8;
OS   Mus musculus (Mouse).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX   NCBI_TaxID=10090;
RN   [1]
RP   SEQUENCE FROM N.A. (ISOFORMS 1 AND 2).
RC   STRAIN=129/Sv;
RX   MEDLINE=20047850; PubMed=10580115; DOI=10.1016/S0014-5793(99)01473-8;
RA   Wechselberger C., Puglisi R., Lepperdinger G., Boitani C., Kreil G.;
RT   "The mammalian homologue of Bv8 from frog skin is mainly expressed in
RT   spermatocytes.";
RL   FEBS Lett. 462:177-181(1999).
RN   [2]
RP   SEQUENCE FROM N.A. (ISOFORMS 1; 2 AND 3).
RC   STRAIN=129/SvJ;
RX   PubMed=11054548; DOI=10.1016/S0378-1119(00)00355-3;
RA   Jilek A., Engel E., Beier D., Lepperdinger G.;
RT   "Murine Bv8 gene maps near a synteny breakpoint of mouse chromosome 6
RT   and human 3p21.";
RL   Gene 256:189-195(2000).
RN   [3]
RP   SEQUENCE FROM N.A. (ISOFORM 2), AND FUNCTION.
RC   STRAIN=C57BL/6;
RX   MEDLINE=22022134; PubMed=12024206; DOI=10.1038/417405a;
RA   Cheng M.Y., Bullock C.M., Li C., Lee A.G., Bermak J.C., Belluzzi J.,
RA   Weaver D.R., Leslie F.M., Zhou Q.-Y.;
RT   "Prokineticin 2 transmits the behavioural circadian rhythm of the
RT   suprachiasmatic nucleus.";
RL   Nature 417:405-410(2002).
RN   [4]
RP   SEQUENCE FROM N.A. (ISOFORM 1).
RC   STRAIN=C57BL/6J; TISSUE=Testis;
RX   MEDLINE=22354683; PubMed=12466851; DOI=10.1038/nature01266;
RA   Okazaki Y., Furuno M., Kasukawa T., Adachi J., Bono H., Kondo S.,
RA   Nikaido I., Osato N., Saito R., Suzuki H., Yamanaka I., Kiyosawa H.,
RA   Yagi K., Tomaru Y., Hasegawa Y., Nogami A., Schonbach C., Gojobori T.,
RA   Baldarelli R., Hill D.P., Bult C., Hume D.A., Quackenbush J.,
RA   Schriml L.M., Kanapin A., Matsuda H., Batalov S., Beisel K.W.,
RA   Blake J.A., Bradt D., Brusic V., Chothia C., Corbani L.E., Cousins S.,
RA   Dalla E., Dragani T.A., Fletcher C.F., Forrest A., Frazer K.S.,
RA   Gaasterland T., Gariboldi M., Gissi C., Godzik A., Gough J.,
RA   Grimmond S., Gustincich S., Hirokawa N., Jackson I.J., Jarvis E.D.,
RA   Kanai A., Kawaji H., Kawasawa Y., Kedzierski R.M., King B.L.,
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GenCore version 5.1.6

OM protein - protein search, using sw model

Run on: November 7, 2005, 20:44:40 ; Search time 114.467 Seconds
(without alignments)
273.682 Million cell updates/sec

Title: US-10-811-328-6
Perfect score: 461
Sequence: 1 AVITGACDKDSQCGGGMCCA.....LPGLACLRTSFNRFICLAQK 81

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 2105692 seqs, 386760381 residues

Total number of hits satisfying chosen parameters: 2105692

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : A_Geneseq_16Dec04:*
1: geneseqp1980s:*
2: geneseqp1990s:*
3: geneseqp2000s:*
4: geneseqp2001s:*
5: geneseqp2002s:*
6: geneseqp2003as:*
7: geneseqp2003bs:*
8: geneseqp2004s:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1	461	100.0	81	5	ABG94398	Abg94398 Human GPC
2	461	100.0	81	5	AAO15530	Aao15530 Human phy
3	461	100.0	81	5	AAE24385	Aae24385 Human pro
4	461	100.0	81	7	ADD69041	Add69041 Human Bv8
5	461	100.0	81	7	ADO05356	Ado05356 Human maj
6	461	100.0	81	8	ADN43258	Adn43258 Amino aci
7	461	100.0	81	8	ADR24005	Adr24005 Human ZAQ
8	461	100.0	108	4	AAB68426	Aab68426 Amino aci
9	461	100.0	108	5	ABG94397	Abg94397 Human GPC
10	461	100.0	108	5	AAO15531	Aao15531 Human phy
11	461	100.0	108	5	AAE24384	Aae24384 Human pro
12	461	100.0	108	6	ABU07602	Abu07602 Human ZVE
13	461	100.0	108	6	AAE36789	Aae36789 Human Bv8
14	461	100.0	108	7	ADD69039	Add69039 Human Bv8
15	461	100.0	108	7	ADF28067	Adf28067 Human Zve
16	461	100.0	108	7	ABG75087	Abg75087 Human pro
17	461	100.0	108	7	ADJ71811	Adj71811 Human pro
18	461	100.0	108	8	ADN41839	Adn41839 Amino aci
19	461	100.0	108	8	ADO24421	Ado24421 Human PRO
20	461	100.0	108	8	ADS86957	Ads86957 Human Zve
21	461	100.0	108	8	ADS00460	Ads00460 Human Bv8
22	461	100.0	116	8	ADN41861	Adn41861 Amino aci
23	461	100.0	116	8	ADS86981	Ads86981 Human Zve
24	456	98.9	80	5	ABG94400	Abg94400 C-termina
25	456	98.9	80	7	ADD69044	Add69044 Human Bv8
26	445	96.5	81	5	ABG94402	Abg94402 Rat GPCR
27	445	96.5	81	5	ABB06963	Abb06963 Rat G pro
28	445	96.5	81	7	ADD69061	Add69061 Rat Bv8-r
29	445	96.5	81	7	ADO05358	Ado05358 Mouse maj
30	445	96.5	81	8	ADN43260	Adn43260 Amino aci
31	445	96.5	81	8	ADN43262	Adn43262 Amino aci
32	445	96.5	107	5	ABG94408	Abg94408 Mouse GPC
33	445	96.5	107	5	ABG94401	Abg94401 Rat GPCR
34	445	96.5	107	5	ABB06962	Abb06962 Rat G pro
35	445	96.5	107	6	AAE36790	Aae36790 Mouse Bv8
36	445	96.5	107	7	ADD69059	Add69059 Rat Bv8-r
37	445	96.5	107	7	ADD69077	Add69077 Murine Bv
38	445	96.5	107	8	ADS00462	Ads00462 Murine Bv
39	440.5	95.6	102	8	ADN43257	Adn43257 Amino aci
40	440.5	95.6	124	7	ADJ71808	Adj71808 Human Bv8
41	440.5	95.6	129	6	AAE36788	Aae36788 Human Bv8
42	440.5	95.6	129	7	ADJ71815	Adj71815 Human pro
43	440.5	95.6	129	8	ADN41864	Adn41864 Amino aci
44	440.5	95.6	129	8	ADS86984	Ads86984 Human Zve
45	440.5	95.6	129	8	ADS00458	Ads00458 Human Bv8

ALIGNMENTS

RESULT 1
ABG94398
ID ABG94398 standard; protein; 81 AA.
XX
AC ABG94398;
XX
DT 27-NOV-2002 (first entry)
XX
DE Human GPCR ligand Bv8 protein sequence #2.
XX
KW G-protein coupled receptor; GPCR; ZAQ; human; ZAQC; ZAQT; rat; ZAQ1;
KW rZAQ1; rZAQ2; mouse; I5E receptor; mI5E; GPR73; Bv8 protein; MIT1;
KW digestive disorder; central nervous system disorder; CNS; diarrhoea;
KW bowel inflammation; constipation; food absorption disorder; nootropic;
KW Alzheimer's disease; Parkinson's disease; schizophrenia; laxative;
KW antiinflammatory; antidiarrhoeic; neuroleptic; neuroprotective; receptor.
XX
OS Homo sapiens.
XX
PN WO200262944-A2.
XX
PD 15-AUG-2002.
XX
PF 01-FEB-2002; 2002WO-JP000852.
XX
PR 02-FEB-2001; 2001JP-00026820.
XX
PA (TAKE) TAKEDA CHEM IND LTD.
XX
PI Ohtaki T, Masuda Y, Takatsu Y, Watanabe T, Terao Y, Shintani Y;
PI Hinuma S;
XX
DR WPI; 2002-627537/67.
DR N-PSDB; ABS71104.
XX
PT Screening of compounds modifying the binding of G-protein coupled
PT receptor protein ZAQ and related proteins to their ligands for use in
PT treatment and diagnosis of digestive disorders.
XX
PS Claim 1; Page 165; 197pp; Japanese.
XX
CC The present invention relates to a screening method for compounds for
CC their ability to modify the binding of G-protein coupled receptor (GPCR)
CC protein ZAQ and related proteins (human ZAQC, human ZAQT, rat ZAQ1
CC (rZAQ1), rZAQ2, human and mouse I5E (mI5E) receptor, and mouse GPR73) to
CC their ligands (the mature form of human, mouse or rat Bv8 protein). The
CC receptor protein and ligand are contacted in the presence or absence of
CC the test compound. The compounds are useful in a drug composition for the

```
CC   treatment, and prevention of digestive and central nervous system (CNS)
CC   disorders, including bowel inflammation, diarrhoea, constipation, food
CC   absorption disorders, Alzheimer's disease, Parkinson's disease and
CC   schizophrenia. The present sequence represents a GPCR or related protein
XX
SQ   Sequence 81 AA;

  Query Match            100.0%;  Score 461;  DB 5;  Length 81;
  Best Local Similarity  100.0%;  Pred. No. 3.2e-41;
  Matches   81;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 AVITGACDKDSQCGGGMCCAVSIWVKSIRICTPMGKLGDSCHPLTRKVPFFGRRMHHTCP 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 AVITGACDKDSQCGGGMCCAVSIWVKSIRICTPMGKLGDSCHPLTRKVPFFGRRMHHTCP 60

Qy         61 CLPGLACLRTSFNRFICLAQK 81
              |||||||||||||||||||||
Db         61 CLPGLACLRTSFNRFICLAQK 81


RESULT 2
AAO15530
ID   AAO15530 standard; protein; 81 AA.
XX
AC   AAO15530;
XX
DT   24-OCT-2002  (first entry)
XX
DE   Human physiologically-active ZAQ ligand-related protein 5.
XX
KW   Human; ZAQ ligand; physiologically-active ZAQ ligand; digestive disease;
KW   colitis; diarrhoea.
XX
OS   Homo sapiens.
XX
PN   WO200257443-A1.
XX
PD   25-JUL-2002.
XX
PF   21-JAN-2002; 2002WO-JP000378.
XX
PR   22-JAN-2001; 2001JP-00013027.
PR   17-MAY-2001; 2001JP-00147759.
XX
PA   (TAKE ) TAKEDA CHEM IND LTD.
XX
PI   Yamada T,  Suenaga M,  Nishimura O;
XX
DR   WPI; 2002-566801/60.
XX
PT   Industrial production of physiologically-active ZAQ ligand by expressing
PT   in transformant prokaryote and refolding in redox buffer, for use in
PT   preventing or treating digestive diseases e.g. colitis and diarrhea.
XX
PS   Claim 5; Page 83; 93pp; Japanese.
XX
CC   The invention comprises a method for producing an active peptide that has
CC   the same activity as a ZAQ ligand isolated from eukaryotic cells. The
CC   method of the invention is useful for the production of a physiologically
CC   -active ZAQ ligand for use in preventing or treating digestive diseases
CC   (e.g. colitis and diarrhea). The present amino acid sequence represents a
CC   human physiologically active ZAQ ligand-related protein
XX
SQ   Sequence 81 AA;

  Query Match            100.0%;  Score 461;  DB 5;  Length 81;
  Best Local Similarity  100.0%;  Pred. No. 3.2e-41;
  Matches   81;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 AVITGACDKDSQCGGGMCCAVSIWVKSIRICTPMGKLGDSCHPLTRKVPFFGRRMHHTCP 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 AVITGACDKDSQCGGGMCCAVSIWVKSIRICTPMGKLGDSCHPLTRKVPFFGRRMHHTCP 60

Qy         61 CLPGLACLRTSFNRFICLAQK 81
              |||||||||||||||||||||
Db         61 CLPGLACLRTSFNRFICLAQK 81


RESULT 3
AAE24385
ID   AAE24385 standard; protein; 81 AA.
XX
AC   AAE24385;
XX
DT   04-OCT-2002  (first entry)
XX
DE   Human prokineticin 2 mature protein.
XX
KW   Human; prokineticin 2; gastrointestinal motility; intestinal cancer;
KW   irritable bowel syndrome; gastrointestinal reflux disease; diarrhoea;
KW   diabetic gastroparesis; chronic constipation; malabsorptive disorder;
KW   inflammatory bowel disorder; analgesic; infectious disease.
XX
OS   Homo sapiens.
XX
PN   WO200236625-A2.
XX
PD   10-MAY-2002.
XX
PF   01-NOV-2001; 2001WO-US047969.
XX
PR   03-NOV-2000; 2000US-0245882P.
XX
PA   (REGC ) UNIV CALIFORNIA.
XX
PI   Zhou Q,  Ehlert FJ;
XX
DR   WPI; 2002-479752/51.
DR   N-PSDB; AAD39322.
XX
PT   New isolated human prokineticin 1 and 2 polypeptides that stimulate
PT   gastrointestinal smooth muscle contraction, useful for improving impaired
PT   gastrointestinal motility in irritable bowel syndrome, chronic
PT   constipation.
XX
PS   Claim 3; Page 81; 86pp; English.
XX
CC   The invention relates to human prokineticin 1 and 2 polypeptides that
CC   stimulate gastrointestinal smooth muscle contraction and nucleic acid
CC   molecules encoding such polypeptides. Polypeptides of the invention are
CC   useful for treating disorders involving impaired gastrointestinal
CC   motility. They are useful for stimulating gastrointestinal motility in
CC   disorders such as irritable bowel syndrome, diabetic gastroparesis, post-
CC   operational ileus, chronic constipation and gastrointestinal reflux
CC   disease. The prokineticin antagonists are useful for inhibiting
CC   gastrointestinal motility in conditions of diarrhoea, malabsorptive
CC   disorders, inflammatory bowel disorders, infectious diseases and
CC   intestinal cancers. The antagonists also act as analgesics. The present
CC   sequence is human prokineticin 2 mature protein
XX
SQ   Sequence 81 AA;

  Query Match            100.0%;  Score 461;  DB 5;  Length 81;
  Best Local Similarity  100.0%;  Pred. No. 3.2e-41;
  Matches   81;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 AVITGACDKDSQCGGGMCCAVSIWVKSIRICTPMGKLGDSCHPLTRKVPFFGRRMHHTCP 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 AVITGACDKDSQCGGGMCCAVSIWVKSIRICTPMGKLGDSCHPLTRKVPFFGRRMHHTCP 60

Qy         61 CLPGLACLRTSFNRFICLAQK 81
              |||||||||||||||||||||
Db         61 CLPGLACLRTSFNRFICLAQK 81


RESULT 4
```

```
ADD69041
ID   ADD69041 standard; protein; 81 AA.
XX
AC   ADD69041;
XX
DT   15-JAN-2004  (first entry)
XX
DE   Human Bv8-related protein - SEQ ID 19.
XX
KW   angiogenesis inhibitor; cytostatic; antiinflammatory; cancer;
KW   ovarian disease; diabetic retinopathy; inflammatory; ZAQ; Bv8; I5E;
KW   human.
XX
OS   Homo sapiens.
XX
PN   WO2003066860-A1.
XX
PD   14-AUG-2003.
XX
PF   03-FEB-2003; 2003WO-JP001057.
XX
PR   04-FEB-2002; 2002JP-00027299.
XX
PA   (TAKE ) TAKEDA CHEM IND LTD.
XX
PI   Ohtaki T,  Masuda Y,  Takatsu Y;
XX
DR   WPI; 2003-646310/61.
DR   N-PSDB; ADD69042.
XX
PT   Angiogenesis inhibitors for treatment and prevention of cancer, ovarian
PT   diseases and inflammatory disease.
XX
PS   Claim 1; SEQ ID NO 19; 308pp; Japanese.
XX
CC   The invention relates to a novel angiogenesis inhibitor comprising a
CC   compound that inhibits the activity of an amino acid sequence given in
CC   the specification. Angiogenesis-related proteins Bv8, ZAQ and I5E were
CC   utilised within the method of the invention. The molecules of the
CC   invention demonstrate cytostatic and antiinflammatory activities whilst
CC   the method may be useful for treatment and prevention of cancer, ovarian
CC   diseases, diabetic retinopathy and inflammatory disease. The current
CC   sequence is that of the human Bv8-related protein of the invention.
XX
SQ   Sequence 81 AA;

  Query Match             100.0%;  Score 461;  DB 7;  Length 81;
  Best Local Similarity   100.0%;  Pred. No. 3.2e-41;
  Matches   81;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 AVITGACDKDSQCGGGMCCAVSIWVKSIRICTPMGKLGDSCHPLTRKVPFFGRRMHHTCP 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 AVITGACDKDSQCGGGMCCAVSIWVKSIRICTPMGKLGDSCHPLTRKVPFFGRRMHHTCP 60

Qy         61 CLPGLACLRTSFNRFICLAQK 81
              |||||||||||||||||||||
Db         61 CLPGLACLRTSFNRFICLAQK 81


RESULT 5
ADO05356
ID   ADO05356 standard; protein; 81 AA.
XX
AC   ADO05356;
XX
DT   01-JUL-2004  (first entry)
XX
DE   Human major prokineticin 2 (PK2), SEQ ID NO:5.
XX
KW   Human; prokineticin 2; PK2; circadian rhythm; modulation; drug screening;
KW   circadian rhythm disorder; non-24-hour sleep-wake syndrome;
KW   rapid time-zone change syndrome; jetlag; work-shift syndrome;
KW   delayed phase sleep syndrome; advanced sleep phase syndrome;
KW   irregular sleep-wake pattern syndrome; decreased amplitude syndrome;
KW   seasonal affective disorder; ultradian rhythm; daydreaming; urination;
KW   hunger; infardian rhythm; female sexual receptivity; CNS;
KW   central nervous syndrome; PK2 receptor antagonist; PK2 receptor agonist.
XX
OS   Homo sapiens.
XX
PN   WO2003088904-A2.
XX
PD   30-OCT-2003.
XX
PF   15-APR-2003; 2003WO-US011538.
XX
PR   15-APR-2002; 2002US-0372836P.
XX
PA   (REGC ) UNIV CALIFORNIA.
XX
PI   Zhou Q,  Bullock CM;
XX
DR   WPI; 2003-854028/79.
XX
PT   Screening for compounds for modulating circadian rhythm, for treating
PT   seasonal disorders, comprises determining ability of prokineticin-2
PT   receptor antagonist or agonist to modulate one or more circadian rhythm
PT   function indicia.
XX
PS   Disclosure; SEQ ID NO 5; 164pp; English.
XX
CC   The invention relates to a method of screening for a compound for its
CC   ability to modulate circadian rhythm. The method involved determining the
CC   ability of a prokineticin 2 (PK2) receptor agonist or antagonist to
CC   modulate one or more indicia or circadian rhythm function. The compound
CC   is identified as being a PK2 receptor agonist or antagonist by
CC   determining its effect on a predetermined signal such as calcium
CC   mobilisation produced by the interaction of PK2 and a receptor selected
CC   from the PK2 receptor (e.g., ADO05353) or the PK1 receptor (e.g.,
CC   ADO05355). The invention is based on the findings that PK2 expression in
CC   the suprachiasmatic nucleus (SCN) oscillates in a circadian fashion, and
CC   that PK2 receptor activation modulates circadian rhythm in rats. The
CC   invention also relates to a method of modulating the circadian rhythm of
CC   an animal by administration of a PK2 receptor antagonist or agonist; a
CC   composition comprising a detectably labelled PK2 and an isolated mouse
CC   PK2 receptor; nucleic acid constructs, vectors and host cells comprising
CC   a PK2 gene promoter (ADO05365-ADO05369) operably linked to a heterologous
CC   nucleotide sequence; use of such constructs to identify modulators of
CC   circadian rhythm and for the light regulated expression of a nucleic acid
CC   molecule in an animal; and oligonucleotides at least 17 bases in length
CC   which are able to hybridise to the human PK2 promoter ADO05365. The
CC   methods of the invention are useful for identifying compounds for
CC   modulating circadian rhythm. Such modulators include PK2 receptor
CC   antagonists which promote sleep, and PK2 receptor agonists which promote
CC   alertness. The circadian rhythm modulators may be used in the treatment
CC   of circadian rhythm disorders such as non-24-hour sleep-wake syndrome,
CC   rapid time-zone change syndrome (jetlag), work-shift syndrome, delayed
CC   phase sleep syndrome, advanced sleep phase syndrome, irregular sleep-wake
CC   pattern syndrome, syndrome associated with decreased amplitude, and
CC   seasonal affective disorder. They may also be used for modulating
CC   biological rhythms with a periodicity of less than 24 hours (ultradian
CC   rhythm) such as daydreaming, urination or hunger, or those with a
CC   periodicity of more than 24 hours (infardian rhythm) such as sexual
CC   receptivity (heat) in female animals. The present sequence represents the
CC   major human PK2.
XX
SQ   Sequence 81 AA;

  Query Match             100.0%;  Score 461;  DB 7;  Length 81;
  Best Local Similarity   100.0%;  Pred. No. 3.2e-41;
  Matches   81;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 AVITGACDKDSQCGGGMCCAVSIWVKSIRICTPMGKLGDSCHPLTRKVPFFGRRMHHTCP 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 AVITGACDKDSQCGGGMCCAVSIWVKSIRICTPMGKLGDSCHPLTRKVPFFGRRMHHTCP 60
```

```
Qy          61 CLPGLACLRTSFNRFICLAQK 81
               |||||||||||||||||||||
Db          61 CLPGLACLRTSFNRFICLAQK 81


RESULT 6
ADN43258
ID   ADN43258 standard; protein; 81 AA.
XX
AC   ADN43258;
XX
DT   15-JUL-2004  (first entry)
XX
DE   Amino acid sequence of human prokineticin 2 (PK2) isoform 2.
XX
KW   neurogenesis; prokineticin receptor; PKR; neural stem; progenitor cell;
KW   neural regeneration; Alzheimer's disease; Parkinson's disease;
KW   neurodegenerative disease; prokineticin 2; PK2.
XX
OS   Homo sapiens.
XX
PN   WO2004032851-A2.
XX
PD   22-APR-2004.
XX
PF   03-OCT-2003; 2003WO-US031626.
XX
PR   04-OCT-2002; 2002US-0416202P.
XX
PA   (REGC ) UNIV CALIFORNIA.
XX
PI   Zhou Q,  Cheng MY;
XX
DR   WPI; 2004-340794/31.
XX
PT   Identifying a compound that modulates neurogenesis comprises contacting a
PT   neural stem or progenitor cell with a compound that modulates
PT   prokineticin receptor signaling and determining its ability to modulate
PT   neurogenesis.
XX
PS   Claim 26; Fig 6B; 103pp; English.
XX
CC   The specification describes a method for identifying a compound that
CC   modulates neurogenesis. The method comprises providing a compound that
CC   modulates prokineticin receptor (PKR) signaling, contacting a neural stem
CC   or progenitor cell with the compound, and determining the ability of the
CC   compound to modulate neurogenesis. The method is useful for modulating
CC   neurogenesis or for identifying compounds that modulate neurogenesis.
CC   These are used for both ex vivo or in vivo therapeutic applications where
CC   neural regeneration is desirable, such as in Alzheimer's disease,
CC   Parkinson's disease or other debilitating neurodegenerative diseases. The
CC   present sequence represents human prokineticin 2 (PK2) isoform 2, which
CC   may be used in the method of the invention to modulate neurogenesis.
XX
SQ   Sequence 81 AA;

  Query Match             100.0%;  Score 461;  DB 8;  Length 81;
  Best Local Similarity   100.0%;  Pred. No. 3.2e-41;
  Matches   81;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 AVITGACDKDSQCGGGMCCAVSIWVKSIRICTPMGKLGDSCHPLTRKVPFFGRRMHHTCP 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 AVITGACDKDSQCGGGMCCAVSIWVKSIRICTPMGKLGDSCHPLTRKVPFFGRRMHHTCP 60

Qy         61 CLPGLACLRTSFNRFICLAQK 81
              |||||||||||||||||||||
Db         61 CLPGLACLRTSFNRFICLAQK 81


RESULT 7
ADR24005
ID   ADR24005 standard; protein; 81 AA.
XX
AC   ADR24005;
XX
DT   21-OCT-2004  (first entry)
XX
DE   Human ZAQ-1 ligand-associated protein.
XX
KW   antiangiogenic; antialcoholic; antiarrhythmic; antiarteriosclerotic;
KW   anticonvulsant; antidepressant; antidiabetic; anti-HIV; antimanic;
KW   antiparkinsonian; cerebroprotective; cytostatic; eating disorders;
KW   endocrine; gastrointestinal; gynecological; hypnotic; hypotensive;
KW   neuroleptic; neuroprotective; nootropic; ophthalmological; tranquilizer;
KW   vasotropic; vulnerary; monoclonal antibody; human; ZAQL-1; ligand;
KW   hybridoma cell; assay; diagnosis; endometrial cancer; endometriosis;
KW   ovulation disorder; digestive disease; angiogenesis; pregnancy;
KW   eating disorder; sleeping disorder; seasonal depression;
KW   reproductive dysfunction; endocrine disease; senile dementia;
KW   Alzheimer's disease; aging; cerebral circulatory disorder; head trauma;
KW   spinal injury; epilepsy; anxiety; depression; schizophrenia; alcoholism;
KW   Parkinson's disease; hypertension; arteriosclerosis; arrhythmia;
KW   premenstrual disorder syndrome; glaucoma; AIDS; diabetes.
XX
OS   Homo sapiens.
XX
PN   WO2004065419-A1.
XX
PD   05-AUG-2004.
XX
PF   21-JAN-2004; 2004WO-JP000498.
XX
PR   22-JAN-2003; 2003JP-00014055.
XX
PA   (TAKE ) TAKEDA CHEM IND LTD.
XX
PI   Matsumoto H,  Horikoshi Y,  Masuda Y,  Ohtaki T;
XX
DR   WPI; 2004-593431/57.
XX
PT   New monoclonal antibody having high avidity to human ZAQL-1 polypeptide,
PT   useful for preventing, treating or diagnosing diseases such as
PT   endometrial cancer, ovulation disorders, Alzheimer's disease, AIDS,
PT   Parkinson's disease and diabetes.
XX
PS   Claim 4; SEQ ID NO 3; 64pp; Japanese.
XX
CC   The invention relates to a monoclonal antibody (I) having high avidity to
CC   human ZAQL-1 ligand polypeptides, comprising either of two fully defined
CC   sequences of 86 amino acids (S1). (I) is ZL1-107a or ZL1-234a produced
CC   from hybridoma cells ZL1-107 FERM BP-8256 or ZL1-234 FERM BF-8257. (I) is
CC   useful for carrying out assay of the polypeptide containing (S1) which
CC   involves reacting (I) with the test-liquid containing the polypeptide or
CC   its salt, and measuring the ratio of the polypeptide bound to (I). (I) is
CC   useful as a diagnostic or therapeutic agent for diagnosis and/or
CC   treatment of diseases such as endometrial cancer, endometriosis or
CC   ovulation disorders, digestive diseases, diseases associated with
CC   angiogenesis, diseases relating to pregnancy, eating disorder, sleeping
CC   disorder, seasonal depression, reproductive dysfunction, endocrine
CC   diseases, senile dementia, Alzheimer's disease, various disorders caused
CC   by aging, cerebral circulatory disorder, head trauma, spinal injury,
CC   epilepsy, anxiety, depression, manic depression, schizophrenia,
CC   alcoholism, Parkinson's disease, hypertension, arteriosclerosis,
CC   arrhythmia, premenstrual disorder syndrome, glaucoma, AIDS, diabetes,
CC   etc. This sequence corresponds to a ZAQ-1 ligand associated protein used
CC   in the invention.
XX
SQ   Sequence 81 AA;

  Query Match             100.0%;  Score 461;  DB 8;  Length 81;
  Best Local Similarity   100.0%;  Pred. No. 3.2e-41;
  Matches   81;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 AVITGACDKDSQCGGGMCCAVSIWVKSIRICTPMGKLGDSCHPLTRKVPFFGRRMHHTCP 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 AVITGACDKDSQCGGGMCCAVSIWVKSIRICTPMGKLGDSCHPLTRKVPFFGRRMHHTCP 60
```

```
Qy          61 CLPGLACLRTSFNRFICLAQK 81
               |||||||||||||||||||||
Db          61 CLPGLACLRTSFNRFICLAQK 81
```

RESULT 8
AAB68426
ID AAB68426 standard; protein; 108 AA.
XX
AC AAB68426;
XX
DT 23-JUL-2001 (first entry)
XX
DE Amino acid sequence of a human Zven1 polypeptide.
XX
KW Zven1; 3p21.1; 3p14.3; Zven2; small cell lung cancer; wound healing;
KW antitumour; antiinflammatory; necrosis; tissue growth; digestive enzyme;
KW cellular differentiation; gastrointestinal cell contractility;
KW gastrointestinal motility; inflammation; hypermotility; diarrhoea;
KW Crohn's disease.
XX
OS Homo sapiens.
XX
PN WO200136465-A2.
XX
PD 25-MAY-2001.
XX
PF 14-NOV-2000; 2000WO-US031278.
XX
PR 16-NOV-1999; 99US-00442164.
PR 25-FEB-2000; 2000US-00511879.
PR 19-APR-2000; 2000US-00552203.
PR 07-JUN-2000; 2000US-0210332P.
XX
PA (ZYMO) ZYMOGENETICS INC.
XX
PI Sheppard PO, Bishop PD, Whitmore TE, Thompson PP;
XX
DR WPI; 2001-355611/37.
DR N-PSDB; AAF85368.
XX
PT Novel isolated Zven polypeptide useful for inhibiting proliferation of
PT tumor cells, for treating small cell cancer of lung, to promote wound
PT healing, and for treating Crohn's disease and diarrhea.
XX
PS Claim 4; Page 3; 98pp; English.
XX
CC The present sequence represents a human Zven1 polypeptide. The Zven1 gene
CC is present on chromosome 3p21.1-3p14.3. The specification also describes
CC Zven2. Zven polynucleotides and polypeptides are useful in veterinary and
CC human therapeutics, for treating small cell cancer of the lung, to
CC promote wound healing, to prevent or to treat an adverse reaction of the
CC skin to a skin-sensitizing agent or a skin-irritating agent, to stimulate
CC the immune system of an immunocompromised individual, as antitumour
CC agents, as antiinflammatory agents, as agents to regulate regeneration or
CC remodeling of tissue, as agents to modulate necrosis or tissue growth
CC developmental arrest, to inhibit proliferation of tumour cells, cellular
CC differentiation and necrosis, to treat disorders associated with
CC gastrointestinal cell contractility, secretion of digestive enzymes and
CC acids, gastrointestinal motility, recruitment of digestive enzymes,
CC inflammation, and conditions associated with hypermotility such as
CC diarrhoea and Crohn's disease
XX
SQ Sequence 108 AA;

```
  Query Match             100.0%;  Score 461;  DB 4;  Length 108;
  Best Local Similarity   100.0%;  Pred. No. 4.3e-41;
  Matches   81;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 AVITGACDKDSQCGGGMCCAVSIWVKSIRICTPMGKLGDSCHPLTRKVPFFGRRMHHTCP 60
              |||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         28 AVITGACDKDSQCGGGMCCAVSIWVKSIRICTPMGKLGDSCHPLTRKVPFFGRRMHHTCP 87

Qy         61 CLPGLACLRTSFNRFICLAQK 81
              |||||||||||||||||||||
Db         88 CLPGLACLRTSFNRFICLAQK 108
```

RESULT 9
ABG94397
ID ABG94397 standard; protein; 108 AA.
XX
AC ABG94397;
XX
DT 27-NOV-2002 (first entry)
XX
DE Human GPCR ligand Bv8 protein sequence #1.
XX
KW G-protein coupled receptor; GPCR; ZAQ; human; ZAQC; ZAQT; rat; ZAQ1;
KW rZAQ1; rZAQ2; mouse; I5E receptor; mI5E; GPR73; Bv8 protein; MIT1;
KW digestive disorder; central nervous system disorder; CNS; diarrhoea;
KW bowel inflammation; constipation; food absorption disorder; nootropic;
KW Alzheimer's disease; Parkinson's disease; schizophrenia; laxative;
KW antiinflammatory; antidiarrhoeic; neuroleptic; neuroprotective; receptor.
XX
OS Homo sapiens.
XX
PN WO200262944-A2.
XX
PD 15-AUG-2002.
XX
PF 01-FEB-2002; 2002WO-JP000852.
XX
PR 02-FEB-2001; 2001JP-00026820.
XX
PA (TAKE) TAKEDA CHEM IND LTD.
XX
PI Ohtaki T, Masuda Y, Takatsu Y, Watanabe T, Terao Y, Shintani Y;
PI Hinuma S;
XX
DR WPI; 2002-627537/67.
DR N-PSDB; ABS71103.
XX
PT Screening of compounds modifying the binding of G-protein coupled
PT receptor protein ZAQ and related proteins to their ligands for use in
PT treatment and diagnosis of digestive disorders.
XX
PS Example 3; Page 164; 197pp; Japanese.
XX
CC The present invention relates to a screening method for compounds for
CC their ability to modify the binding of G-protein coupled receptor (GPCR)
CC protein ZAQ and related proteins (human ZAQC, human ZAQT, rat ZAQ1
CC (rZAQ1), rZAQ2, human and mouse I5E (mI5E) receptor, and mouse GPR73) to
CC their ligands (the mature form of human, mouse or rat Bv8 protein). The
CC receptor protein and ligand are contacted in the presence or absence of
CC the test compound. The compounds are useful in a drug composition for the
CC treatment, and prevention of digestive and central nervous system (CNS)
CC disorders, including bowel inflammation, diarrhoea, constipation, food
CC absorption disorders, Alzheimer's disease, Parkinson's disease and
CC schizophrenia. The present sequence represents a GPCR or related protein
XX
SQ Sequence 108 AA;

```
  Query Match             100.0%;  Score 461;  DB 5;  Length 108;
  Best Local Similarity   100.0%;  Pred. No. 4.3e-41;
  Matches   81;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 AVITGACDKDSQCGGGMCCAVSIWVKSIRICTPMGKLGDSCHPLTRKVPFFGRRMHHTCP 60
              |||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         28 AVITGACDKDSQCGGGMCCAVSIWVKSIRICTPMGKLGDSCHPLTRKVPFFGRRMHHTCP 87

Qy         61 CLPGLACLRTSFNRFICLAQK 81
              |||||||||||||||||||||
Db         88 CLPGLACLRTSFNRFICLAQK 108
```

```
RESULT 10
AAO15531
ID   AAO15531 standard; protein; 108 AA.
XX
AC   AAO15531;
XX
DT   24-OCT-2002  (first entry)
XX
DE   Human physiologically-active ZAQ ligand-related protein 6.
XX
KW   Human; ZAQ ligand; physiologically-active ZAQ ligand; digestive disease;
KW   colitis; diarrhoea.
XX
OS   Homo sapiens.
XX
PN   WO200257443-A1.
XX
PD   25-JUL-2002.
XX
PF   21-JAN-2002; 2002WO-JP000378.
XX
PR   22-JAN-2001; 2001JP-00013027.
PR   17-MAY-2001; 2001JP-00147759.
XX
PA   (TAKE ) TAKEDA CHEM IND LTD.
XX
PI   Yamada T,  Suenaga M,  Nishimura O;
XX
DR   WPI; 2002-566801/60.
XX
PT   Industrial production of physiologically-active ZAQ ligand by expressing
PT   in transformant prokaryote and refolding in redox buffer, for use in
PT   preventing or treating digestive diseases e.g. colitis and diarrhea.
XX
PS   Disclosure; Page 88; 93pp; Japanese.
XX
CC   The invention comprises a method for producing an active peptide that has
CC   the same activity as a ZAQ ligand isolated from eukaryotic cells. The
CC   method of the invention is useful for the production of a physiologically
CC   -active ZAQ ligand for use in preventing or treating digestive diseases
CC   (e.g. colitis and diarrhea). The present amino acid sequence represents a
CC   human physiologically active ZAQ ligand-related protein
XX
SQ   Sequence 108 AA;

  Query Match            100.0%;  Score 461;  DB 5;  Length 108;
  Best Local Similarity  100.0%;  Pred. No. 4.3e-41;
  Matches   81;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 AVITGACDKDSQCGGGMCCAVSIWVKSIRICTPMGKLGDSCHPLTRKVPFFGRRMHHTCP 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         28 AVITGACDKDSQCGGGMCCAVSIWVKSIRICTPMGKLGDSCHPLTRKVPFFGRRMHHTCP 87

Qy         61 CLPGLACLRTSFNRFICLAQK 81
              |||||||||||||||||||||
Db         88 CLPGLACLRTSFNRFICLAQK 108


RESULT 11
AAE24384
ID   AAE24384 standard; protein; 108 AA.
XX
AC   AAE24384;
XX
DT   04-OCT-2002  (first entry)
XX
DE   Human prokineticin 2 precursor protein.
XX
KW   Human; prokineticin 2; gastrointestinal motility; intestinal cancer;
KW   irritable bowel syndrome; gastrointestinal reflux disease; diarrhoea;
KW   diabetic gastroparesis; chronic constipation; malabsorptive disorder;
KW   inflammatory bowel disorder; analgesic; infectious disease.
XX
OS   Homo sapiens.
XX
FH   Key             Location/Qualifiers
FT   Peptide         1. .27
FT                   /label= Signal_peptide
FT   Protein         28. .108
FT                   /note= "Mature human prokineticin 2"
XX
PN   WO200236625-A2.
XX
PD   10-MAY-2002.
XX
PF   01-NOV-2001; 2001WO-US047969.
XX
PR   03-NOV-2000; 2000US-0245882P.
XX
PA   (REGC ) UNIV CALIFORNIA.
XX
PI   Zhou Q,  Ehlert FJ;
XX
DR   WPI; 2002-479752/51.
DR   N-PSDB; AAD39322.
XX
PT   New isolated human prokineticin 1 and 2 polypeptides that stimulate
PT   gastrointestinal smooth muscle contraction, useful for improving impaired
PT   gastrointestinal motility in irritable bowel syndrome, chronic
PT   constipation.
XX
PS   Example 1; Fig 1; 86pp; English.
XX
CC   The invention relates to human prokineticin 1 and 2 polypeptides that
CC   stimulate gastrointestinal smooth muscle contraction and nucleic acid
CC   molecules encoding such polypeptides. Polypeptides of the invention are
CC   useful for treating disorders involving impaired gastrointestinal
CC   motility. They are useful for stimulating gastrointestinal motility in
CC   disorders such as irritable bowel syndrome, diabetic gastroparesis, post-
CC   operational ileus, chronic constipation and gastrointestinal reflux
CC   disease. The prokineticin antagonists are useful for inhibiting
CC   gastrointestinal motility in conditions of diarrhoea, malabsorptive
CC   disorders, inflammatory bowel disorders, infectious diseases and
CC   intestinal cancers. The antagonists also act as analgesics. The present
CC   sequence is human prokineticin 2 precursor protein
XX
SQ   Sequence 108 AA;

  Query Match            100.0%;  Score 461;  DB 5;  Length 108;
  Best Local Similarity  100.0%;  Pred. No. 4.3e-41;
  Matches   81;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 AVITGACDKDSQCGGGMCCAVSIWVKSIRICTPMGKLGDSCHPLTRKVPFFGRRMHHTCP 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         28 AVITGACDKDSQCGGGMCCAVSIWVKSIRICTPMGKLGDSCHPLTRKVPFFGRRMHHTCP 87

Qy         61 CLPGLACLRTSFNRFICLAQK 81
              |||||||||||||||||||||
Db         88 CLPGLACLRTSFNRFICLAQK 108


RESULT 12
ABU07602
ID   ABU07602 standard; protein; 108 AA.
XX
AC   ABU07602;
XX
DT   10-MAY-2003  (first entry)
XX
DE   Human ZVEN1.
XX
KW   Human; ZVEN1; tumour.
XX
OS   Homo sapiens.
XX
```

```
PN   US6485938-B1.
XX
PD   26-NOV-2002.
XX
PF   14-NOV-2000; 2000US-00712529.
XX
PR   16-NOV-1999;   99US-0165905P.
PR   25-FEB-2000; 2000US-0184875P.
PR   19-APR-2000; 2000US-0197750P.
PR   07-JUN-2000; 2000US-0210332P.
XX
PA   (ZYMO ) ZYMOGENETICS INC.
XX
PI   Sheppard PO,  Bishop PD;
XX
DR   WPI; 2003-287426/28.
DR   N-PSDB; ABX12102, ABX12103.
XX
PT   Novel isolated nucleic acid molecule that encodes a Zven1 polypeptide,
PT   useful for inhibiting the proliferation of tumor cells, or to detect the
PT   expression of a Zven1 or Zven2 gene in a biological sample.
XX
PS   Claim 17; Col 3; 37pp; English.
XX
CC   The invention relates to an isolated nucleic acid molecule (I) that
CC   encodes a Zven1 polypeptide. (I) is useful for inhibiting the
CC   proliferation of tumour cells, as probes or primers to clone 5' non-
CC   coding regions of a Zven gene, to direct the expression of heterologous
CC   gene in tissues of, for example, transgenic animals or patients treated
CC   with gene therapy, to detect the expression of a Zven1 or Zven2 gene in a
CC   biological sample, to detect activated neutrophils, to identify
CC   therapeutic or prophylactic agents that modulate the response of a
CC   neutrophil to a pathogen, to determine whether a subject's chromosomes
CC   contain a mutation in the Zven gene, or to detect aberrations in Zven1 or
CC   Zven2 locus. (I) is useful as educational tools, as laboratory practicum
CC   kits for courses related to genetics and molecular biology, protein
CC   chemistry and antibody production and analysis. The present sequence
CC   represents the amino acid sequence of ZVEN1
XX
SQ   Sequence 108 AA;

  Query Match             100.0%;  Score 461;  DB 6;  Length 108;
  Best Local Similarity   100.0%;  Pred. No. 4.3e-41;
  Matches   81;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 AVITGACDKDSQCGGGMCCAVSIWVKSIRICTPMGKLGDSCHPLTRKVPFFGRRMHHTCP 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         28 AVITGACDKDSQCGGGMCCAVSIWVKSIRICTPMGKLGDSCHPLTRKVPFFGRRMHHTCP 87

Qy         61 CLPGLACLRTSFNRFICLAQK 81
              |||||||||||||||||||||
Db         88 CLPGLACLRTSFNRFICLAQK 108


RESULT 13
AAE36789
ID   AAE36789 standard; protein; 108 AA.
XX
AC   AAE36789;
XX
DT   07-AUG-2003  (first entry)
XX
DE   Human Bv8 homologue splice variant protein.
XX
KW   Human; cell proliferation; cancer; lipoid congenital adrenal hyperplasia;
KW   Bv8; androgen-dependent tumour; precocious puberty; sexual maturation;
KW   adrenal-hypoplasia congenita; infertility; hypogonadotropic hypogonadism;
KW   McCune-Albright syndrome; cytostatic; angiogenic; variant.
XX
OS   Homo sapiens.
OS   Synthetic.
XX
FH   Key             Location/Qualifiers
FT   Peptide         1. .21
FT                   /label= Signal-peptide
FT   Protein         22. .108
FT                   /note= "Human mature Bv8 homologue splice variant
FT                   protein"
FT   Modified-site   41. .46
FT                   /note= "Myristoylation site"
FT   Modified-site   42. .47
FT                   /note= "Myristoylation site"
FT   Modified-site   43. .48
FT                   /note= "Myristoylation site"
FT   Modified-site   78. .81
FT                   /note= "Amidation site"
XX
PN   WO2003020892-A2.
XX
PD   13-MAR-2003.
XX
PF   27-AUG-2002; 2002WO-US027571.
XX
PR   29-AUG-2001; 2001US-0316184P.
XX
PA   (GETH ) GENENTECH INC.
XX
PI   Ferrara N,  Le Couter J;
XX
DR   WPI; 2003-290180/28.
DR   N-PSDB; AAD55707.
XX
PT   Inducing proliferation of endothelial cells or enhancing cell survival,
PT   by contacting the cells with Bv8 or introducing nucleic acid encoding Bv8
PT   into cells to induce proliferation or to enhance survival of the cells.
XX
PS   Claim 8; Fig 4; 87pp; English.
XX
CC   The present invention relates to a novel method of inducing proliferation
CC   of endothelial cells or enhancing cell survival, involving contacting the
CC   cells with Bv8 or introducing a nucleic acid encoding Bv8 into the cells
CC   to induce proliferation or to enhance survival of the cells. The method
CC   is useful for inducing proliferation of endothelial cells and to enhance
CC   cell survival, where the cells are vascular endothelial cells, especially
CC   steroidogenic endothelial cells. It is useful for inhibiting endothelial
CC   cell proliferation, for treating cancer (e.g., hormone-dependent cancer
CC   or cancer of the reproductive organs, especially testicular cancer) in
CC   mammals preferably human. The method of the invention is also useful for
CC   treating a condition associated with hormone producing tissue in mammals,
CC   where the condition is associated with hormone producing tissue which is
CC   selected from lipoid congenital adrenal hyperplasia, infertility, sexual
CC   maturation, androgen-dependent tumours, precocious puberty, adrenal-
CC   hypoplasia congenita, McCune-Albright syndrome and hypogonadotropic
CC   hypogonadism. The present sequence is human Bv8 homologue splice variant
CC   protein
XX
SQ   Sequence 108 AA;

  Query Match             100.0%;  Score 461;  DB 6;  Length 108;
  Best Local Similarity   100.0%;  Pred. No. 4.3e-41;
  Matches   81;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 AVITGACDKDSQCGGGMCCAVSIWVKSIRICTPMGKLGDSCHPLTRKVPFFGRRMHHTCP 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         28 AVITGACDKDSQCGGGMCCAVSIWVKSIRICTPMGKLGDSCHPLTRKVPFFGRRMHHTCP 87

Qy         61 CLPGLACLRTSFNRFICLAQK 81
              |||||||||||||||||||||
Db         88 CLPGLACLRTSFNRFICLAQK 108


RESULT 14
ADD69039
ID   ADD69039 standard; protein; 108 AA.
XX
AC   ADD69039;
```

XX
DT 15-JAN-2004 (first entry)
XX
DE Human Bv8-related protein - SEQ ID 17.
XX
KW angiogenesis inhibitor; cytostatic; antiinflammatory; cancer;
KW ovarian disease; diabetic retinopathy; inflammatory; ZAQ; Bv8; I5E;
KW human.
XX
OS Homo sapiens.
XX
PN WO2003066860-A1.
XX
PD 14-AUG-2003.
XX
PF 03-FEB-2003; 2003WO-JP001057.
XX
PR 04-FEB-2002; 2002JP-00027299.
XX
PA (TAKE) TAKEDA CHEM IND LTD.
XX
PI Ohtaki T, Masuda Y, Takatsu Y;
XX
DR WPI; 2003-646310/61.
DR N-PSDB; ADD69040.
XX
PT Angiogenesis inhibitors for treatment and prevention of cancer, ovarian
PT diseases and inflammatory disease.
XX
PS Example 3; SEQ ID NO 17; 308pp; Japanese.
XX
CC The invention relates to a novel angiogenesis inhibitor comprising a
CC compound that inhibits the activity of an amino acid sequence given in
CC the specification. Angiogenesis-related proteins Bv8, ZAQ and I5E were
CC utilised within the method of the invention. The molecules of the
CC invention demonstrate cytostatic and antiinflammatory activities whilst
CC the method may be useful for treatment and prevention of cancer, ovarian
CC diseases, diabetic retinopathy and inflammatory disease. The current
CC sequence is that of the human Bv8-related protein of the invention.
XX
SQ Sequence 108 AA;

Query Match 100.0%; Score 461; DB 7; Length 108;
Best Local Similarity 100.0%; Pred. No. 4.3e-41;
Matches 81; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 AVITGACDKDSQCGGGMCCAVSIWVKSIRICTPMGKLGDSCHPLTRKVPFFGRRMHHTCP 60
Db 28 AVITGACDKDSQCGGGMCCAVSIWVKSIRICTPMGKLGDSCHPLTRKVPFFGRRMHHTCP 87

Qy 61 CLPGLACLRTSFNRFICLAQK 81
Db 88 CLPGLACLRTSFNRFICLAQK 108

RESULT 15
ADF28067
ID ADF28067 standard; protein; 108 AA.
XX
AC ADF28067;
XX
DT 12-FEB-2004 (first entry)
XX
DE Human Zven 1.
XX
KW Zven1; cytostatic; gene therapy; cancer; human; chromosome 3p21.1-3p14.3.
XX
OS Homo sapiens.
XX
PN US2003148317-A1.
XX
PD 07-AUG-2003.
XX
PF 02-AUG-2002; 2002US-00212201.
XX
PR 16-NOV-1999; 99US-0165905P.
PR 25-FEB-2000; 2000US-0184875P.
PR 19-APR-2000; 2000US-0197750P.
PR 07-JUN-2000; 2000US-0210332P.
PR 14-NOV-2000; 2000US-00712529.
XX
PA (ZYMO) ZYMOGENETICS INC.
XX
PI Sheppard PO, Bishop PD;
XX
DR WPI; 2003-897549/82.
DR N-PSDB; ADF28066, ADF28068.
XX
PT New Zven1 protein, useful for preparing a composition for treating e.g.
PT cancer.
XX
PS Claim 1; SEQ ID NO 2; 41pp; English.
XX
CC The invention desribes an isolated Zven1 polypeptide comprising a
CC sequence that is at least 70% identical to amino acid residues 23-108 of
CC the 108-amino acid sequence and that binds with an antibody that
CC specifically binds with a polypeptide comprising the sequence comprising
CC 108 amino acids. The polypeptide has cytostatic properties and is useful
CC in gene therapy. The protein is Zven1 protein and useful for preparing a
CC composition for treating e.g. cancer. This sequence encodes the novel
CC human polypeptide Zven1 encoded by a gene found on chromosome 3p21.1-
CC 3p14.3.
XX
SQ Sequence 108 AA;

Query Match 100.0%; Score 461; DB 7; Length 108;
Best Local Similarity 100.0%; Pred. No. 4.3e-41;
Matches 81; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 AVITGACDKDSQCGGGMCCAVSIWVKSIRICTPMGKLGDSCHPLTRKVPFFGRRMHHTCP 60
Db 28 AVITGACDKDSQCGGGMCCAVSIWVKSIRICTPMGKLGDSCHPLTRKVPFFGRRMHHTCP 87

Qy 61 CLPGLACLRTSFNRFICLAQK 81
Db 88 CLPGLACLRTSFNRFICLAQK 108

RESULT 16
ABG75087
ID ABG75087 standard; protein; 108 AA.
XX
AC ABG75087;
XX
DT 11-MAR-2004 (first entry)
XX
DE Human prokineticin 2 (PROK2).
XX
KW PROK1; PROK2; G protein-coupled receptor 192; GPCR 192; ligand; cancer;
KW metabolic disorder; central nervous system disorder;
KW gastrointestinal disorder; immune disorder; neuroprotective;
KW immunosuppressive; cytostatic; agonist; antagonist.
XX
OS Homo sapiens.
XX
PN WO2003083073-A2.
XX
PD 09-OCT-2003.
XX
PF 28-MAR-2003; 2003WO-US009522.
XX
PR 28-MAR-2002; 2002US-0368849P.
XX
PA (FARB) BAYER PHARM CORP.
XX
PI Buckholz T, Vandenberg M, Pellegrino C, Heitmeier S, Taylor I;

```
PI   Gedrich R;
XX
DR   WPI; 2003-788345/74.
DR   N-PSDB; ACH00975.
XX
PT   Identifying an agonist or antagonist of G-protein-coupled-receptor 192,
PT   (GPCR), useful for treating metabolic or immune disorders, or cancer
PT   comprises contacting GPCR 192 with a test compound, and detecting agonist
PT   or antagonist activity.
XX
PS   Claim 12; Fig 6; 0pp; English.
XX
CC   The present invention relates to a method of identifying an agonist or
CC   antagonist of G protein-coupled receptor (GPCR) 192, which comprises
CC   contacting GPCR 192 with a test compound, and detecting agonist or
CC   antagonist activity. The methods and compositions containing the agonist
CC   or antagonist are useful in the manufacture of a medicament for treating
CC   central nervous system, metabolic or immune disorders, or cancer. The
CC   present sequence is human prokineticin 2 (PROK2) as shown in the
CC   exemplification of the invention
XX
SQ   Sequence 108 AA;

  Query Match             100.0%;  Score 461;  DB 7;  Length 108;
  Best Local Similarity   100.0%;  Pred. No. 4.3e-41;
  Matches   81;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 AVITGACDKDSQCGGGMCCAVSIWVKSIRICTPMGKLGDSCHPLTRKVPFFGRRMHHTCP 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         28 AVITGACDKDSQCGGGMCCAVSIWVKSIRICTPMGKLGDSCHPLTRKVPFFGRRMHHTCP 87

Qy         61 CLPGLACLRTSFNRFICLAQK 81
              |||||||||||||||||||||
Db         88 CLPGLACLRTSFNRFICLAQK 108


RESULT 17
ADJ71811
ID   ADJ71811 standard; protein; 108 AA.
XX
AC   ADJ71811;
XX
DT   06-MAY-2004  (first entry)
XX
DE   Human prokineticin 2 protein.
XX
KW   laxative; antiinflammatory; neuroprotective; nootropic; antiparkinsonian;
KW   antirheumatic; antiarthritic; antidiabetic; antiallergic; antiasthmatic;
KW   vulnerary; cytostatic; antibacterial; virucide; gene therapy;
KW   prokineticin; diagnostics; forensics; gene mapping; drug screening;
KW   biodiversity; impaired gastrointestinal motility; chronic constipation;
KW   diabetic gastroparesis; irritable bowel syndrome; postoperational ileus;
KW   angiogenesis; neovascularization; heart; sperm disorder; azoospermia;
KW   neurodegenerative disease; Alzheimer's disease; Parkinson's disease;
KW   autoimmune disorder; rheumatoid arthritis; diabetes; allergy; asthma;
KW   wounds; cancer.
XX
OS   Homo sapiens.
XX
PN   WO2003040326-A2.
XX
PD   15-MAY-2003.
XX
PF   04-NOV-2002; 2002WO-US035465.
XX
PR   02-NOV-2001; 2001US-0343902P.
XX
PA   (HYSE-) HYSEQ INC.
XX
PI   Ghosh MJ,  Tang TY,  Liu C,  Drmanac RT;
XX
DR   WPI; 2003-441552/41.
XX
PT   New prokineticin-like polynucleotide and polypeptide for diagnosing,
PT   preventing or treating impaired gastrointestinal motility, cancer or
PT   neurodegenerative or autoimmune disorders, and for gene mapping or drug
PT   screening.
XX
PS   Disclosure; SEQ ID NO 17; 132pp; English.
XX
CC   The invention relates to novel prokineticin-like polypeptides and
CC   polynucleotides. The polynucleotide and polypeptide are useful in
CC   diagnostics, forensics, gene mapping, drug screening, identification of
CC   mutations responsible for genetic disorders or traits, to assess
CC   biodiversity, and to produce many other types of data and products
CC   dependent on DNA and amino acid sequences. The polynucleotide and
CC   polypeptide may also be used for treating diseases due to impaired
CC   gastrointestinal motility (e.g. chronic constipation, diabetic
CC   gastroparesis, irritable bowel syndrome or postoperational ileus), for
CC   regulating angiogenesis and neovascularization, as well as growth and
CC   development in heart and other tissues, for treating sperm disorders
CC   including azoospermia, neurodegenerative diseases (e.g. Alzheimer's
CC   disease or Parkinson's disease), autoimmune disorders (e.g. rheumatoid
CC   arthritis, diabetes, allergy or asthma), wounds, cancer or infections.
CC   This sequence corresponds to a protein which has similarity to the novel
CC   prokineticin-like proteins of the invention.
XX
SQ   Sequence 108 AA;

  Query Match             100.0%;  Score 461;  DB 7;  Length 108;
  Best Local Similarity   100.0%;  Pred. No. 4.3e-41;
  Matches   81;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 AVITGACDKDSQCGGGMCCAVSIWVKSIRICTPMGKLGDSCHPLTRKVPFFGRRMHHTCP 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         28 AVITGACDKDSQCGGGMCCAVSIWVKSIRICTPMGKLGDSCHPLTRKVPFFGRRMHHTCP 87

Qy         61 CLPGLACLRTSFNRFICLAQK 81
              |||||||||||||||||||||
Db         88 CLPGLACLRTSFNRFICLAQK 108


RESULT 18
ADN41839
ID   ADN41839 standard; protein; 108 AA.
XX
AC   ADN41839;
XX
DT   15-JUL-2004  (first entry)
XX
DE   Amino acid sequence of a human Zven1 polypeptide.
XX
KW   human; Zven1; Zven2; prokineticin2; prokineticin1;
KW   G-protein coupled receptor; GPCR73a; GPCR73b; inflammation; intestine;
KW   inflammatory bowel disease; irritable bowel syndrome; ulcerative colitis;
KW   Crohn's disease.
XX
OS   Homo sapiens.
XX
FH   Key             Location/Qualifiers
FT   Protein         28. .108
FT                   /note= "mature protein"
XX
PN   WO2004032850-A2.
XX
PD   22-APR-2004.
XX
PF   07-OCT-2003; 2003WO-US031562.
XX
PR   07-OCT-2002; 2002US-0416718P.
PR   07-OCT-2002; 2002US-0416719P.
PR   16-DEC-2002; 2002US-0433918P.
PR   16-DEC-2002; 2002US-0434116P.
PR   03-OCT-2003; 2003US-0508603P.
PR   03-OCT-2003; 2003US-0508614P.
XX
```

PA (ZYMO) ZYMOGENETICS INC.
XX
PI Thompson PJ, Sheppard PO;
XX
DR WPI; 2004-340793/31.
DR N-PSDB; ADN41838.
XX
PT Treating inflammatory bowel disease or irritable bowel syndrome in
PT mammals comprises administering to the mammal a Zven1 or Zven2
PT polypeptide or nucleic acid molecule, or a Zven1 or Zven2 antagonist.
XX
PS Claim 5; Page 3; 147pp; English.
XX
CC The present sequence represents a human Zven1 polypeptide. Zven1 and
CC Zven2 are also known as prokineticin2 and prokineticin1, respectively.
CC Receptors for Zven1 and Zven2 have been identified as G-protein coupled
CC receptors, GPCR73a and GPCR73b. The specification describes a method for
CC reducing or treating inflammation in the intestine of a mammal,
CC comprising administering a Zven1 or Zven2 antagonist to reduce the
CC inflammation in the intestine. The antagonist is preferably a receptor
CC that binds Zven1 or Zven2. The method is useful for diagnosing or
CC treating inflammatory bowel disease, irritable bowel syndrome, ulcerative
CC colitis, or Crohn's disease.
XX
SQ Sequence 108 AA;

Query Match 100.0%; Score 461; DB 8; Length 108;
Best Local Similarity 100.0%; Pred. No. 4.3e-41;
Matches 81; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 AVITGACDKDSQCGGGMCCAVSIWVKSIRICTPMGKLGDSCHPLTRKVPFFGRRMHHTCP 60
Db 28 AVITGACDKDSQCGGGMCCAVSIWVKSIRICTPMGKLGDSCHPLTRKVPFFGRRMHHTCP 87

Qy 61 CLPGLACLRTSFNRFICLAQK 81
Db 88 CLPGLACLRTSFNRFICLAQK 108

RESULT 19
ADO24421
ID ADO24421 standard; protein; 108 AA.
XX
AC ADO24421;
XX
DT 12-AUG-2004 (first entry)
XX
DE Human PRO28691 protein SEQ ID NO:60.
XX
KW human; PRO; antianaemic; antiarthritic; antiinflammatory; antipsoriatic;
KW antirheumatic; dermatological; immunostimulant; immunosuppressive;
KW osteopathic; vasotropic; immune related disease;
KW inflammatory immune response; rheumatoid arthritis; osteoarthritis;
KW juvenile chronic arthritis; systemic lupus erythematosus;
KW spondyloarthropathy; systemic sclerosis;
KW idiopathic inflammatory myopathy; Sjogren's syndrome;
KW systemic vasculitis; sarcoidosis; autoimmune haemolytic anaemia;
KW autoimmune disease; immune-mediated skin disease; bullous skin disease;
KW erythema multiforme; contact dermatitis; psoriasis; lymphadenopathy;
KW splenomegaly; leukopaenia.
XX
OS Homo sapiens.
XX
PN WO2004043397-A2.
XX
PD 27-MAY-2004.
XX
PF 12-NOV-2003; 2003WO-US036002.
XX
PR 12-NOV-2002; 2002US-0425931P.
XX
PA (GETH) GENENTECH INC.
XX
PI Abbas A, Bodary S, Clark H, Wu TD, Shoenfeld J, Wood WI;
XX
DR WPI; 2004-420080/39.
DR N-PSDB; ADO24420.
XX
PT New isolated PRO polypeptide e.g. PRO37584, PRO69493, PRO87327 etc,
PT capable of stimulating an immune response, useful for treating diseases
PT such as rheumatoid arthritis, psoriasis, and leukopenia.
XX
PS Claim 9; SEQ ID NO 60; 326pp; English.
XX
CC The present invention describes an isolated human PRO polypeptide (I).
CC Also described: (1) an isolated PRO nucleic (II) acid encoding (I); (2) a
CC vector (III) comprising (II); (3) a host cell (IV) comprising (III); (4)
CC producing (I); (5) a chimeric molecule (V) comprising (I) fused to a
CC heterologous amino acid sequence; (6) an antibody (VI) which specifically
CC binds to (I); (7) a composition of matter comprising (I), an agonist of
CC (I), an antagonist of (I), or (VI) in combination with a carrier; (8)
CC treating (M1) an immune related disorder in a mammal, by administering
CC (I), an agonist of (I), an antagonist of (I), or the antibody (VI); (9)
CC diagnosing an immune related disease in a mammal, by detecting the level
CC of expression of a gene encoding (I) in a test sample of tissue cells
CC obtained from the mammal and in a control sample of known normal tissue
CC cells of the same cell type; (10) identifying a compound that inhibits
CC the activity of (I); (11) identifying a compound (M2) that inhibits the
CC expression of a gene encoding (I); (12) identifying a compound that
CC mimics the activity of (I); and (12) stimulating the immune response in a
CC mammal, by administering (I) or its antagonist to the mammal. (I) has
CC antianaemic, antiarthritic, antiinflammatory, antipsoriatic,
CC antirheumatic, dermatological, immunostimulant, immunosuppressive,
CC osteopathic and vasotropic activities. (I) and (VI) are useful for
CC diagnosing an immune related disease in a mammal. (II) is useful for
CC diagnosing an inflammatory immune response in a mammal. (VI) is useful
CC for determining the presence of (I) in a sample suspected of containing
CC the polypeptide. (M1) is useful for treating mammal having an immune
CC related disorder chosen from rheumatoid arthritis, osteoarthritis,
CC juvenile chronic arthritis, systemic lupus erythematosus,
CC spondyloarthropathies, systemic sclerosis, idiopathic inflammatory
CC myopathies, Sjogren's syndrome, systemic vasculitis, sarcoidosis,
CC autoimmune haemolytic anaemia, autoimmune or immune-mediated skin
CC diseases including bullous skin diseases, erythema multiforme and contact
CC dermatitis, psoriasis, lymphadenopathy, splenomegaly and leukopaenia. The
CC present sequence represents a human PRO protein from the present
CC invention.
XX
SQ Sequence 108 AA;

Query Match 100.0%; Score 461; DB 8; Length 108;
Best Local Similarity 100.0%; Pred. No. 4.3e-41;
Matches 81; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 AVITGACDKDSQCGGGMCCAVSIWVKSIRICTPMGKLGDSCHPLTRKVPFFGRRMHHTCP 60
Db 28 AVITGACDKDSQCGGGMCCAVSIWVKSIRICTPMGKLGDSCHPLTRKVPFFGRRMHHTCP 87

Qy 61 CLPGLACLRTSFNRFICLAQK 81
Db 88 CLPGLACLRTSFNRFICLAQK 108

RESULT 20
ADS86957
ID ADS86957 standard; protein; 108 AA.
XX
AC ADS86957;
XX
DT 18-NOV-2004 (first entry)
XX
DE Human Zven1 protein.
XX
KW gastrointestinal; anabolic; gastrointestinal contractility;
KW gastric emptying; intestinal transit; gastroparesis; chemokine release;
KW neutrophil infiltration; appetite; weight gain; sensitization;

KW thermal stimulus; mechanical stimulus; painful stimulus; vasculogenesis;
KW angiogenesis; cardiac stem cell; motility disorder; Zven1; Zven2.
XX
OS Homo sapiens.
XX
PN WO2004031367-A2.
XX
PD 15-APR-2004.
XX
PF 07-OCT-2003; 2003WO-US031714.
XX
PR 07-OCT-2002; 2002US-0416718P.
PR 07-OCT-2002; 2002US-0416719P.
PR 16-DEC-2002; 2002US-0433918P.
PR 16-DEC-2002; 2002US-0434116P.
PR 03-OCT-2003; 2003US-00416718.
PR 03-OCT-2003; 2003US-00416719.
XX
PA (ZYMO) ZYMOGENETICS INC.
XX
PI Thompson PJ, Lewis KE, Jaspers SR, Garcia RM, West RR;
PI Holderman SD, Chan C;
XX
DR WPI; 2004-330174/30.
DR N-PSDB; ADS86956.
XX
PT Use of Zven1 and Zven2 polypeptides for modulating gastrointestinal
PT contractility, gastric emptying or intestinal transit in a mammal,
PT stimulating gastrointestinal contractility, or for treating
PT gastroparesis.
XX
PS Disclosure; SEQ ID NO 2; 143pp; English.
XX
CC The invention relates to the used of a polypeptide for modulating
CC gastrointestinal contractility, gastric emptying or intestinal transit in
CC a mammal, treating gastroparesis, stimulating chemokine release,
CC stimulating neutrophil infiltration, inducing or increasing appetite or
CC weight gain in a mammal, increasing or decreasing sensitization to a
CC thermal, mechanical or painful stimulus in a mammal, or inducing
CC vasculogenesis or angiogenesis in cardiac stem cells. The polypeptides
CC and polynucleotides are useful for treating intestinal motility disorders
CC and improving gastrointestinal function with Zven1 and Zven2
CC polypeptides. The methods are also useful for modulating gastrointestinal
CC contractility, gastric emptying or intestinal transit in a mammal,
CC stimulating gastrointestinal contractility, stimulating chemokine
CC release, stimulating neutrophil infiltration, inducing or increasing
CC appetite or weight gain in a mammal, increasing or decreasing
CC sensitization to a thermal, mechanical or painful stimulus in a mammal,
CC or inducing vasculogenesis or angiogenesis in cardiac stem cells. This
CC sequence corresponds to the human Zven1 protein.
XX
SQ Sequence 108 AA;

Query Match 100.0%; Score 461; DB 8; Length 108;
Best Local Similarity 100.0%; Pred. No. 4.3e-41;
Matches 81; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

```
Qy          1 AVITGACDKDSQCGGGMCCAVSIWVKSIRICTPMGKLGDSCHPLTRKVPFFGRRMHHTCP 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         28 AVITGACDKDSQCGGGMCCAVSIWVKSIRICTPMGKLGDSCHPLTRKVPFFGRRMHHTCP 87

Qy         61 CLPGLACLRTSFNRFICLAQK 81
              |||||||||||||||||||||
Db         88 CLPGLACLRTSFNRFICLAQK 108
```

RESULT 21
ADS00460
ID ADS00460 standard; protein; 108 AA.
XX
AC ADS00460;
XX
DT 16-DEC-2004 (first entry)
XX
DE Human Bv8 homologue variant #2, SEQ ID 4.
XX
KW Cytostatic; Antimicrobial; Anti-HIV; Immunostimulant; Antibacterial;
KW Antiinflammatory; Gastrointestinal; Neuroprotective; Muscular;
KW Antipsoriatic; Antiarthritic; Antirheumatic; Antithyroid; Hepatotropic;
KW Virucide; Antidiabetic; Antianemic; haematopoiesis; autoimmune disorder;
KW Bv8; Endocrine Gland derived Vascular Endothelial Growth Factor; EG-VEGF;
KW hematological disorder; leukaemia; myeloproliferative disorder;
KW myelodysplastic disorder; lymphoproliferative disorder;
KW lymphodysplastic disorder; immunodeficiency disorder; HIV infection;
KW neutropenia; bacterial infection; lymphopaenia; autoimmune disorder;
KW inflammatory bowel disease; Crohn's disease; colitis; lupus;
KW multiple sclerosis; myasthenia gravis; optic neuritis; psoriasis;
KW rheumatoid arthritis; Graves Disease; autoimmune hepatitis;
KW type I diabetes; aplastic anaemia; human.
XX
OS Homo sapiens.
XX
PN WO2004081229-A2.
XX
PD 23-SEP-2004.
XX
PF 12-MAR-2004; 2004WO-US007622.
XX
PR 12-MAR-2003; 2003US-0454462P.
PR 14-OCT-2003; 2003US-0511390P.
XX
PA (GETH) GENENTECH INC.
XX
PI Ferrara N, Lecouter J;
XX
DR WPI; 2004-690608/67.
DR N-PSDB; ADS00459.
XX
PT Treating disorder associated with abnormal hematopoiesis or autoimmune
PT disorder by administering antagonist of small protein obtained from
PT Bombina variegata or endocrine gland derived vascular endothelial growth
PT factor, to mammal.
XX
PS Claim 52; SEQ ID NO 4; 161pp; English.
XX
CC The present invention relates to a method (M1) for treating a disorder
CC associated with abnormal haematopoiesis or an autoimmune disorder in a
CC mammal. The method comprises administering antagonists for Bv8 or
CC Endocrine Gland derived Vascular Endothelial Growth Factor (EG-VEGF) to
CC the mammal. Bv8 and EG-VEGF are homologues of Vascular Endothelial Growth
CC Factor (VEGF), an angiogenic factor known to have an important role in
CC tumour growth and survival. (M1) is useful for treating abnormal
CC haematopoiesis such as a hematological disorder e.g., leukaemia,
CC myeloproliferative disorder, myelodysplastic disorder,
CC lymphoproliferative disorder, or lymphodysplastic disorder. The leukaemia
CC is acute myeloid leukaemia, chronic myelogenous leukaemia, or acute
CC lymphodysplastic leukaemia. (M1) is useful for treating immunodeficiency
CC disorder such as primary immunodeficiency disorder, B lymphocyte
CC disorder, T lymphocyte disorder, secondary immunodeficiency disorder, or
CC a condition associated with chemotherapy. The immunodeficiency disorder
CC is a condition associated with an infectious disease (HIV infection). The
CC immunodeficiency disorder is a condition associated with leukaemia,
CC myeloproliferative disorder, or myelodysplastic disorder. (M1) is useful
CC for treating neutropenia, which is associated with an infectious disease
CC (bacterial infection). (M1) is useful for treating lymphopaenia or
CC autoimmune disorder such as inflammatory bowel disease, Crohn's disease,
CC colitis, lupus, multiple sclerosis, myasthenia gravis, optic neuritis,
CC psoriasis, rheumatoid arthritis, Graves Disease, autoimmune hepatitis,
CC type I diabetes or aplastic anaemia. The present sequence is a human Bv8
CC sequence used to illustrate the method of the invention. There are two
CC coding sequences for human Bv8 due to alternative splicing of an exon
CC that encodes a canonical heparin binding domain. The present sequence
CC encodes a Bv8 which comprises the heparin binding domain, while the
CC coding sequence of ADS00459 does not.
XX
SQ Sequence 108 AA;

```
  Query Match             100.0%;  Score 461;  DB 8;  Length 108;
  Best Local Similarity   100.0%;  Pred. No. 4.3e-41;
  Matches   81;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 AVITGACDKDSQCGGGMCCAVSIWVKSIRICTPMGKLGDSCHPLTRKVPFFGRRMHHTCP 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         28 AVITGACDKDSQCGGGMCCAVSIWVKSIRICTPMGKLGDSCHPLTRKVPFFGRRMHHTCP 87

Qy         61 CLPGLACLRTSFNRFICLAQK 81
              |||||||||||||||||||||
Db         88 CLPGLACLRTSFNRFICLAQK 108
```

RESULT 22
ADN41861
ID ADN41861 standard; protein; 116 AA.
XX
AC ADN41861;
XX
DT 15-JUL-2004 (first entry)
XX
DE Amino acid sequence of a human Zven1 with Glu-Glu tag and Gly linker.
XX
KW human; Zven1; Zven2; prokineticin2; prokineticin1;
KW G-protein coupled receptor; GPCR73a; GPCR73b; inflammation; intestine;
KW inflammatory bowel disease; irritable bowel syndrome; ulcerative colitis;
KW Crohn's disease.
XX
OS Homo sapiens.
OS Synthetic.
XX
PN WO2004032850-A2.
XX
PD 22-APR-2004.
XX
PF 07-OCT-2003; 2003WO-US031562.
XX
PR 07-OCT-2002; 2002US-0416718P.
PR 07-OCT-2002; 2002US-0416719P.
PR 16-DEC-2002; 2002US-0433918P.
PR 16-DEC-2002; 2002US-0434116P.
PR 03-OCT-2003; 2003US-0508603P.
PR 03-OCT-2003; 2003US-0508614P.
XX
PA (ZYMO) ZYMOGENETICS INC.
XX
PI Thompson PJ, Sheppard PO;
XX
DR WPI; 2004-340793/31.
DR N-PSDB; ADN41860.
XX
PT Treating inflammatory bowel disease or irritable bowel syndrome in
PT mammals comprises administering to the mammal a Zven1 or Zven2
PT polypeptide or nucleic acid molecule, or a Zven1 or Zven2 antagonist.
XX
PS Example 6; Page 144-145; 147pp; English.
XX
CC The present sequence represents a human Zven1 polypeptide with a Glu-Glu
CC tag and Gly linker. Zven1 and Zven2 are also known as prokineticin2 and
CC prokineticin1, respectively. Receptors for Zven1 and Zven2 have been
CC identified as G-protein coupled receptors, GPCR73a and GPCR73b. The
CC specification describes a method for reducing or treating inflammation in
CC the intestine of a mammal, comprising administering a Zven1 or Zven2
CC antagonist to reduce the inflammation in the intestine. The antagonist is
CC preferably a receptor that binds Zven1 or Zven2. The method is useful for
CC diagnosing or treating inflammatory bowel disease, irritable bowel
CC syndrome, ulcerative colitis, or Crohn's disease.
XX
SQ Sequence 116 AA;

```
  Query Match             100.0%;  Score 461;  DB 8;  Length 116;
  Best Local Similarity   100.0%;  Pred. No. 4.6e-41;
  Matches   81;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 AVITGACDKDSQCGGGMCCAVSIWVKSIRICTPMGKLGDSCHPLTRKVPFFGRRMHHTCP 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         28 AVITGACDKDSQCGGGMCCAVSIWVKSIRICTPMGKLGDSCHPLTRKVPFFGRRMHHTCP 87

Qy         61 CLPGLACLRTSFNRFICLAQK 81
              |||||||||||||||||||||
Db         88 CLPGLACLRTSFNRFICLAQK 108
```

RESULT 23
ADS86981
ID ADS86981 standard; protein; 116 AA.
XX
AC ADS86981;
XX
DT 18-NOV-2004 (first entry)
XX
DE Human Zven1 protein expressed in baculovirus cell expression system.
XX
KW gastrointestinal; anabolic; gastrointestinal contractility;
KW gastric emptying; intestinal transit; gastroparesis; chemokine release;
KW neutrophil infiltration; appetite; weight gain; sensitization;
KW thermal stimulus; mechanical stimulus; painful stimulus; vasculogenesis;
KW angiogenesis; cardiac stem cell; motility disorder; Zven1; Zven2.
XX
OS Homo sapiens.
XX
PN WO2004031367-A2.
XX
PD 15-APR-2004.
XX
PF 07-OCT-2003; 2003WO-US031714.
XX
PR 07-OCT-2002; 2002US-0416718P.
PR 07-OCT-2002; 2002US-0416719P.
PR 16-DEC-2002; 2002US-0433918P.
PR 16-DEC-2002; 2002US-0434116P.
PR 03-OCT-2003; 2003US-00416718.
PR 03-OCT-2003; 2003US-00416719.
XX
PA (ZYMO) ZYMOGENETICS INC.
XX
PI Thompson PJ, Lewis KE, Jaspers SR, Garcia RM, West RR;
PI Holderman SD, Chan C;
XX
DR WPI; 2004-330174/30.
DR N-PSDB; ADS86980.
XX
PT Use of Zven1 and Zven2 polypeptides for modulating gastrointestinal
PT contractility, gastric emptying or intestinal transit in a mammal,
PT stimulating gastrointestinal contractility, or for treating
PT gastroparesis.
XX
PS Example 9; SEQ ID NO 26; 143pp; English.
XX
CC The invention relates to the used of a polypeptide for modulating
CC gastrointestinal contractility, gastric emptying or intestinal transit in
CC a mammal, treating gastroparesis, stimulating chemokine release,
CC stimulating neutrophil infiltration, inducing or increasing appetite or
CC weight gain in a mammal, increasing or decreasing sensitization to a
CC thermal, mechanical or painful stimulus in a mammal, or inducing
CC vasculogenesis or angiogenesis in cardiac stem cells. The polypeptides
CC and polynucleotides are useful for treating intestinal motility disorders
CC and improving gastrointestinal function with Zven1 and Zven2
CC polypeptides. The methods are also useful for modulating gastrointestinal
CC contractility, gastric emptying or intestinal transit in a mammal,
CC stimulating gastrointestinal contractility, stimulating chemokine
CC release, stimulating neutrophil infiltration, inducing or increasing
CC appetite or weight gain in a mammal, increasing or decreasing
CC sensitization to a thermal, mechanical or painful stimulus in a mammal,
CC or inducing vasculogenesis or angiogenesis in cardiac stem cells. This

```
CC   sequence corresponds to the human Zven1 protein expressed in a
CC   baculovirus cell expression system.
XX
SQ   Sequence 116 AA;

  Query Match             100.0%;  Score 461;  DB 8;  Length 116;
  Best Local Similarity   100.0%;  Pred. No. 4.6e-41;
  Matches   81;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 AVITGACDKDSQCGGGMCCAVSIWVKSIRICTPMGKLGDSCHPLTRKVPFFGRRMHHTCP 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         28 AVITGACDKDSQCGGGMCCAVSIWVKSIRICTPMGKLGDSCHPLTRKVPFFGRRMHHTCP 87

Qy         61 CLPGLACLRTSFNRFICLAQK 81
              |||||||||||||||||||||
Db         88 CLPGLACLRTSFNRFICLAQK 108


RESULT 24
ABG94400
ID   ABG94400 standard; protein; 80 AA.
XX
AC   ABG94400;
XX
DT   27-NOV-2002  (first entry)
XX
DE   C-terminal Lys truncated human GPCR ligand Bv8 protein.
XX
KW   G-protein coupled receptor; GPCR; ZAQ; human; ZAQC; ZAQT; rat; ZAQ1;
KW   rZAQ1; rZAQ2; mouse; I5E receptor; mI5E; GPR73; Bv8 protein; MIT1;
KW   digestive disorder; central nervous system disorder; CNS; diarrhoea;
KW   bowel inflammation; constipation; food absorption disorder; nootropic;
KW   Alzheimer's disease; Parkinson's disease; schizophrenia; laxative;
KW   antiinflammatory; antidiarrhoeic; neuroleptic; neuroprotective; receptor.
XX
OS   Homo sapiens.
XX
PN   WO200262944-A2.
XX
PD   15-AUG-2002.
XX
PF   01-FEB-2002; 2002WO-JP000852.
XX
PR   02-FEB-2001; 2001JP-00026820.
XX
PA   (TAKE ) TAKEDA CHEM IND LTD.
XX
PI   Ohtaki T,  Masuda Y,  Takatsu Y,  Watanabe T,  Terao Y,  Shintani Y;
PI   Hinuma S;
XX
DR   WPI; 2002-627537/67.
XX
PT   Screening of compounds modifying the binding of G-protein coupled
PT   receptor protein ZAQ and related proteins to their ligands for use in
PT   treatment and diagnosis of digestive disorders.
XX
PS   Example 3; Page 166-167; 197pp; Japanese.
XX
CC   The present invention relates to a screening method for compounds for
CC   their ability to modify the binding of G-protein coupled receptor (GPCR)
CC   protein ZAQ and related proteins (human ZAQC, human ZAQT, rat ZAQ1
CC   (rZAQ1), rZAQ2, human and mouse I5E (mI5E) receptor, and mouse GPR73) to
CC   their ligands (the mature form of human, mouse or rat Bv8 protein). The
CC   receptor protein and ligand are contacted in the presence or absence of
CC   the test compound. The compounds are useful in a drug composition for the
CC   treatment, and prevention of digestive and central nervous system (CNS)
CC   disorders, including bowel inflammation, diarrhoea, constipation, food
CC   absorption disorders, Alzheimer's disease, Parkinson's disease and
CC   schizophrenia. The present sequence represents a GPCR or related protein
XX
SQ   Sequence 80 AA;

  Query Match             98.9%;  Score 456;  DB 5;  Length 80;
  Best Local Similarity   100.0%;  Pred. No. 1.1e-40;
  Matches   80;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 AVITGACDKDSQCGGGMCCAVSIWVKSIRICTPMGKLGDSCHPLTRKVPFFGRRMHHTCP 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 AVITGACDKDSQCGGGMCCAVSIWVKSIRICTPMGKLGDSCHPLTRKVPFFGRRMHHTCP 60

Qy         61 CLPGLACLRTSFNRFICLAQ 80
              ||||||||||||||||||||
Db         61 CLPGLACLRTSFNRFICLAQ 80


RESULT 25
ADD69044
ID   ADD69044 standard; protein; 80 AA.
XX
AC   ADD69044;
XX
DT   15-JAN-2004  (first entry)
XX
DE   Human Bv8-related protein - SEQ ID 22.
XX
KW   angiogenesis inhibitor; cytostatic; antiinflammatory; cancer;
KW   ovarian disease; diabetic retinopathy; inflammatory; ZAQ; Bv8; I5E;
KW   human.
XX
OS   Homo sapiens.
XX
PN   WO2003066860-A1.
XX
PD   14-AUG-2003.
XX
PF   03-FEB-2003; 2003WO-JP001057.
XX
PR   04-FEB-2002; 2002JP-00027299.
XX
PA   (TAKE ) TAKEDA CHEM IND LTD.
XX
PI   Ohtaki T,  Masuda Y,  Takatsu Y;
XX
DR   WPI; 2003-646310/61.
DR   N-PSDB; ADD69042.
XX
PT   Angiogenesis inhibitors for treatment and prevention of cancer, ovarian
PT   diseases and inflammatory disease.
XX
PS   Example 3; SEQ ID NO 22; 308pp; Japanese.
XX
CC   The invention relates to a novel angiogenesis inhibitor comprising a
CC   compound that inhibits the activity of an amino acid sequence given in
CC   the specification. Angiogenesis-related proteins Bv8, ZAQ and I5E were
CC   utilised within the method of the invention. The molecules of the
CC   invention demonstrate cytostatic and antiinflammatory activities whilst
CC   the method may be useful for treatment and prevention of cancer, ovarian
CC   diseases, diabetic retinopathy and inflammatory disease. The current
CC   sequence is that of the human Bv8-related protein of the invention.
XX
SQ   Sequence 80 AA;

  Query Match             98.9%;  Score 456;  DB 7;  Length 80;
  Best Local Similarity   100.0%;  Pred. No. 1.1e-40;
  Matches   80;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 AVITGACDKDSQCGGGMCCAVSIWVKSIRICTPMGKLGDSCHPLTRKVPFFGRRMHHTCP 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 AVITGACDKDSQCGGGMCCAVSIWVKSIRICTPMGKLGDSCHPLTRKVPFFGRRMHHTCP 60

Qy         61 CLPGLACLRTSFNRFICLAQ 80
              ||||||||||||||||||||
Db         61 CLPGLACLRTSFNRFICLAQ 80


RESULT 26
```

```
ABG94402
ID   ABG94402 standard; protein; 81 AA.
XX
AC   ABG94402;
XX
DT   27-NOV-2002  (first entry)
XX
DE   Rat GPCR ligand Bv8 protein sequence #2.
XX
KW   G-protein coupled receptor; GPCR; ZAQ; human; ZAQC; ZAQT; rat; ZAQ1;
KW   rZAQ1; rZAQ2; mouse; I5E receptor; mI5E; GPR73; Bv8 protein; MIT1;
KW   digestive disorder; central nervous system disorder; CNS; diarrhoea;
KW   bowel inflammation; constipation; food absorption disorder; nootropic;
KW   Alzheimer's disease; Parkinson's disease; schizophrenia; laxative;
KW   antiinflammatory; antidiarrhoeic; neuroleptic; neuroprotective; receptor.
XX
OS   Rattus sp.
XX
PN   WO200262944-A2.
XX
PD   15-AUG-2002.
XX
PF   01-FEB-2002; 2002WO-JP000852.
XX
PR   02-FEB-2001; 2001JP-00026820.
XX
PA   (TAKE ) TAKEDA CHEM IND LTD.
XX
PI   Ohtaki T,  Masuda Y,  Takatsu Y,  Watanabe T,  Terao Y,  Shintani Y;
PI   Hinuma S;
XX
DR   WPI; 2002-627537/67.
DR   N-PSDB; ABS71120.
XX
PT   Screening of compounds modifying the binding of G-protein coupled
PT   receptor protein ZAQ and related proteins to their ligands for use in
PT   treatment and diagnosis of digestive disorders.
XX
PS   Example 5; Page 173-174; 197pp; Japanese.
XX
CC   The present invention relates to a screening method for compounds for
CC   their ability to modify the binding of G-protein coupled receptor (GPCR)
CC   protein ZAQ and related proteins (human ZAQC, human ZAQT, rat ZAQ1
CC   (rZAQ1), rZAQ2, human and mouse I5E (mI5E) receptor, and mouse GPR73) to
CC   their ligands (the mature form of human, mouse or rat Bv8 protein). The
CC   receptor protein and ligand are contacted in the presence or absence of
CC   the test compound. The compounds are useful in a drug composition for the
CC   treatment, and prevention of digestive and central nervous system (CNS)
CC   disorders, including bowel inflammation, diarrhoea, constipation, food
CC   absorption disorders, Alzheimer's disease, Parkinson's disease and
CC   schizophrenia. The present sequence represents a GPCR or related protein
XX
SQ   Sequence 81 AA;

  Query Match             96.5%;  Score 445;  DB 5;  Length 81;
  Best Local Similarity   95.1%;  Pred. No. 1.6e-39;
  Matches   77;  Conservative    4;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 AVITGACDKDSQCGGGMCCAVSIWVKSIRICTPMGKLGDSCHPLTRKVPFFGRRMHHTCP 60
              ||||||||||||||||||||||||||||||||||::|||||||||||||:|||||||||
Db          1 AVITGACDKDSQCGGGMCCAVSIWVKSIRICTPMGQVGDSCHPLTRKVPFWGRRMHHTCP 60

Qy         61 CLPGLACLRTSFNRFICLAQK 81
              |||||||||||||||||:|
Db         61 CLPGLACLRTSFNRFICLARK 81


RESULT 27
ABB06963
ID   ABB06963 standard; protein; 81 AA.
XX
AC   ABB06963;
XX
DT   19-JUN-2002  (first entry)
XX
DE   Rat G protein-coupled receptor protein sequence SEQ ID NO:71.
XX
KW   Rat; rZAQ1; rZAQ2; G protein-coupled receptor; GPCR; antidiarrheic;
KW   laxative; drug development; digestive organ disease; colitis; diarrhoea;
KW   constipation; malabsorption syndrome; diagnosis; gene therapy.
XX
OS   Rattus sp.
XX
PN   WO200216607-A1.
XX
PD   28-FEB-2002.
XX
PF   23-AUG-2001; 2001WO-JP007209.
XX
PR   24-AUG-2000; 2000JP-00253862.
XX
PA   (TAKE ) TAKEDA CHEM IND LTD.
XX
PI   Terao Y,  Shintani Y;
XX
DR   WPI; 2002-269361/31.
DR   N-PSDB; ABL50715.
XX
PT   Human and rat brain-originated G protein-coupled receptor proteins and
PT   encoded DNAs, for developing drugs to treat diseases of the digestive
PT   organs, e.g. colitis, diarrhea, constipation and mal-absorption syndrome.
XX
PS   Example 5; Page 128; 135pp; Japanese.
XX
CC   The present invention describes human and rat brain-originated G protein-
CC   coupled receptor (GPCR) proteins. The GPCR sequences have antidiarrheic
CC   and laxative activities. The GPCR sequences can be used for developing
CC   drugs to treat diseases of the digestive organs, e.g. colitis, diarrhoea,
CC   constipation and malabsorption syndrome, including gene diagnosis and
CC   therapy. The present sequence represents a rat GPCR protein sequence,
CC   which is used in an example from the present invention
XX
SQ   Sequence 81 AA;

  Query Match             96.5%;  Score 445;  DB 5;  Length 81;
  Best Local Similarity   95.1%;  Pred. No. 1.6e-39;
  Matches   77;  Conservative    4;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 AVITGACDKDSQCGGGMCCAVSIWVKSIRICTPMGKLGDSCHPLTRKVPFFGRRMHHTCP 60
              ||||||||||||||||||||||||||||||||||::|||||||||||||:|||||||||
Db          1 AVITGACDKDSQCGGGMCCAVSIWVKSIRICTPMGQVGDSCHPLTRKVPFWGRRMHHTCP 60

Qy         61 CLPGLACLRTSFNRFICLAQK 81
              |||||||||||||||||:|
Db         61 CLPGLACLRTSFNRFICLARK 81


RESULT 28
ADD69061
ID   ADD69061 standard; protein; 81 AA.
XX
AC   ADD69061;
XX
DT   15-JAN-2004  (first entry)
XX
DE   Rat Bv8-related protein - SEQ ID 39.
XX
KW   angiogenesis inhibitor; cytostatic; antiinflammatory; cancer;
KW   ovarian disease; diabetic retinopathy; inflammatory; ZAQ; Bv8; I5E; rat.
XX
OS   Rattus sp.
XX
PN   WO2003066860-A1.
XX
PD   14-AUG-2003.
XX
```

PF 03-FEB-2003; 2003WO-JP001057.
XX
PR 04-FEB-2002; 2002JP-00027299.
XX
PA (TAKE) TAKEDA CHEM IND LTD.
XX
PI Ohtaki T, Masuda Y, Takatsu Y;
XX
DR WPI; 2003-646310/61.
DR N-PSDB; ADD69062.
XX
PT Angiogenesis inhibitors for treatment and prevention of cancer, ovarian
PT diseases and inflammatory disease.
XX
PS Claim 1; SEQ ID NO 39; 308pp; Japanese.
XX
CC The invention relates to a novel angiogenesis inhibitor comprising a
CC compound that inhibits the activity of an amino acid sequence given in
CC the specification. Angiogenesis-related proteins Bv8, ZAQ and I5E were
CC utilised within the method of the invention. The molecules of the
CC invention demonstrate cytostatic and antiinflammatory activities whilst
CC the method may be useful for treatment and prevention of cancer, ovarian
CC diseases, diabetic retinopathy and inflammatory disease. The current
CC sequence is that of the rat Bv8-related protein of the invention.
XX
SQ Sequence 81 AA;

Query Match 96.5%; Score 445; DB 7; Length 81;
Best Local Similarity 95.1%; Pred. No. 1.6e-39;
Matches 77; Conservative 4; Mismatches 0; Indels 0; Gaps 0;

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Qy          1 AVITGACDKDSQCGGGMCCAVSIWVKSIRICTPMGKLGDSCHPLTRKVPFFGRRMHHTCP 60
              ||||||||||||||||||||||||||||||||::|||||||||||||:|||||||||
Db          1 AVITGACDKDSQCGGGMCCAVSIWVKSIRICTPMGQVGDSCHPLTRKVPFWGRRMHHTCP 60

Qy         61 CLPGLACLRTSFNRFICLAQK 81
              |||||||||||||||||:|
Db         61 CLPGLACLRTSFNRFICLARK 81
```

RESULT 29
ADO05358
ID ADO05358 standard; protein; 81 AA.
XX
AC ADO05358;
XX
DT 01-JUL-2004 (first entry)
XX
DE Mouse major prokineticin 2 (PK2), SEQ ID NO:7.
XX
KW Mouse; murine; prokineticin 2; PK2; circadian rhythm; modulation;
KW drug screening; circadian rhythm disorder;
KW non-24-hour sleep-wake syndrome; rapid time-zone change syndrome; jetlag;
KW work-shift syndrome; delayed phase sleep syndrome;
KW advanced sleep phase syndrome; irregular sleep-wake pattern syndrome;
KW decreased amplitude syndrome; seasonal affective disorder;
KW ultradian rhythm; daydreaming; urination; hunger; infardian rhythm;
KW female sexual receptivity; CNS; central nervous syndrome;
KW PK2 receptor antagonist; PK2 receptor agonist.
XX
OS Mus musculus.
XX
PN WO2003088904-A2.
XX
PD 30-OCT-2003.
XX
PF 15-APR-2003; 2003WO-US011538.
XX
PR 15-APR-2002; 2002US-0372836P.
XX
PA (REGC) UNIV CALIFORNIA.
XX
PI Zhou Q, Bullock CM;
XX
DR WPI; 2003-854028/79.
XX
PT Screening for compounds for modulating circadian rhythm, for treating
PT seasonal disorders, comprises determining ability of prokineticin-2
PT receptor antagonist or agonist to modulate one or more circadian rhythm
PT function indicia.
XX
PS Disclosure; SEQ ID NO 7; 164pp; English.
XX
CC The invention relates to a method of screening for a compound for its
CC ability to modulate circadian rhythm. The method involved determining the
CC ability of a prokineticin 2 (PK2) receptor agonist or antagonist to
CC modulate one or more indicia or circadian rhythm function. The compound
CC is identified as being a PK2 receptor agonist or antagonist by
CC determining its effect on a predetermined signal such as calcium
CC mobilisation produced by the interaction of PK2 and a receptor selected
CC from the PK2 receptor (e.g., ADO05353) or the PK1 receptor (e.g.,
CC ADO05355). The invention is based on the findings that PK2 expression in
CC the suprachiasmatic nucleus (SCN) oscillates in a circadian fashion, and
CC that PK2 receptor activation modulates circadian rhythm in rats. The
CC invention also relates to a method of modulating the circadian rhythm of
CC an animal by administration of a PK2 receptor antagonist or agonist; a
CC composition comprising a detectably labelled PK2 and an isolated mouse
CC PK2 receptor; nucleic acid constructs, vectors and host cells comprising
CC a PK2 gene promoter (ADO05365-ADO05369) operably linked to a heterologous
CC nucleotide sequence; use of such constructs to identify modulators of
CC circadian rhythm and for the light regulated expression of a nucleic acid
CC molecule in an animal; and oligonucleotides at least 17 bases in length
CC which are able to hybridise to the human PK2 promoter ADO05365. The
CC methods of the invention are useful for identifying compounds for
CC modulating circadian rhythm. Such modulators include PK2 receptor
CC antagonists which promote sleep, and PK2 receptor agonists which promote
CC alertness. The circadian rhythm modulators may be used in the treatment
CC of circadian rhythm disorders such as non-24-hour sleep-wake syndrome,
CC rapid time-zone change syndrome (jetlag), work-shift syndrome, delayed
CC phase sleep syndrome, advanced sleep phase syndrome, irregular sleep-wake
CC pattern syndrome, syndrome associated with decreased amplitude, and
CC seasonal affective disorder. They may also be used for modulating
CC biological rhythms with a periodicity of less than 24 hours (ultradian
CC rhythm) such as daydreaming, urination or hunger, or those with a
CC periodicity of more than 24 hours (infardian rhythm) such as sexual
CC receptivity (heat) in female animals. The present sequence represents the
CC major murine PK2.
XX
SQ Sequence 81 AA;

Query Match 96.5%; Score 445; DB 7; Length 81;
Best Local Similarity 95.1%; Pred. No. 1.6e-39;
Matches 77; Conservative 4; Mismatches 0; Indels 0; Gaps 0;

```
Qy          1 AVITGACDKDSQCGGGMCCAVSIWVKSIRICTPMGKLGDSCHPLTRKVPFFGRRMHHTCP 60
              ||||||||||||||||||||||||||||||||::|||||||||||||:|||||||||
Db          1 AVITGACDKDSQCGGGMCCAVSIWVKSIRICTPMGQVGDSCHPLTRKVPFWGRRMHHTCP 60

Qy         61 CLPGLACLRTSFNRFICLAQK 81
              |||||||||||||||||:|
Db         61 CLPGLACLRTSFNRFICLARK 81
```

RESULT 30
ADN43260
ID ADN43260 standard; protein; 81 AA.
XX
AC ADN43260;
XX
DT 15-JUL-2004 (first entry)
XX
DE Amino acid sequence of murine prokineticin 2 (PK2).
XX
KW neurogenesis; prokineticin receptor; PKR; neural stem; progenitor cell;
KW neural regeneration; Alzheimer's disease; Parkinson's disease;
KW neurodegenerative disease; prokineticin 2; PK2.

XX
OS Mus sp.
XX
PN WO2004032851-A2.
XX
PD 22-APR-2004.
XX
PF 03-OCT-2003; 2003WO-US031626.
XX
PR 04-OCT-2002; 2002US-0416202P.
XX
PA (REGC) UNIV CALIFORNIA.
XX
PI Zhou Q, Cheng MY;
XX
DR WPI; 2004-340794/31.
XX
PT Identifying a compound that modulates neurogenesis comprises contacting a
PT neural stem or progenitor cell with a compound that modulates
PT prokineticin receptor signaling and determining its ability to modulate
PT neurogenesis.
XX
PS Claim 26; Fig 6B; 103pp; English.
XX
CC The specification describes a method for identifying a compound that
CC modulates neurogenesis. The method comprises providing a compound that
CC modulates prokineticin receptor (PKR) signaling, contacting a neural stem
CC or progenitor cell with the compound, and determining the ability of the
CC compound to modulate neurogenesis. The method is useful for modulating
CC neurogenesis or for identifying compounds that modulate neurogenesis.
CC These are used for both ex vivo or in vivo therapeutic applications where
CC neural regeneration is desirable, such as in Alzheimer's disease,
CC Parkinson's disease or other debilitating neurodegenerative diseases. The
CC present sequence represents murine prokineticin 2 (PK2), which may be
CC used in the method of the invention to modulate neurogenesis.
XX
SQ Sequence 81 AA;

Query Match 96.5%; Score 445; DB 8; Length 81;
Best Local Similarity 95.1%; Pred. No. 1.6e-39;
Matches 77; Conservative 4; Mismatches 0; Indels 0; Gaps 0;

Qy 1 AVITGACDKDSQCGGGMCCAVSIWVKSIRICTPMGKLGDSCHPLTRKVPFFGRRMHHTCP 60
Db 1 AVITGACDKDSQCGGGMCCAVSIWVKSIRICTPMGQVGDSCHPLTRKVPFWGRRMHHTCP 60

Qy 61 CLPGLACLRTSFNRFICLAQK 81
Db 61 CLPGLACLRTSFNRFICLARK 81

RESULT 31
ADN43262
ID ADN43262 standard; protein; 81 AA.
XX
AC ADN43262;
XX
DT 15-JUL-2004 (first entry)
XX
DE Amino acid sequence of rat prokineticin 2 (PK2).
XX
KW neurogenesis; prokineticin receptor; PKR; neural stem; progenitor cell;
KW neural regeneration; Alzheimer's disease; Parkinson's disease;
KW neurodegenerative disease; prokineticin 2; PK2.
XX
OS Rattus sp.
XX
PN WO2004032851-A2.
XX
PD 22-APR-2004.
XX
PF 03-OCT-2003; 2003WO-US031626.
XX
PR 04-OCT-2002; 2002US-0416202P.
XX
PA (REGC) UNIV CALIFORNIA.
XX
PI Zhou Q, Cheng MY;
XX
DR WPI; 2004-340794/31.
XX
PT Identifying a compound that modulates neurogenesis comprises contacting a
PT neural stem or progenitor cell with a compound that modulates
PT prokineticin receptor signaling and determining its ability to modulate
PT neurogenesis.
XX
PS Claim 26; Fig 6B; 103pp; English.
XX
CC The specification describes a method for identifying a compound that
CC modulates neurogenesis. The method comprises providing a compound that
CC modulates prokineticin receptor (PKR) signaling, contacting a neural stem
CC or progenitor cell with the compound, and determining the ability of the
CC compound to modulate neurogenesis. The method is useful for modulating
CC neurogenesis or for identifying compounds that modulate neurogenesis.
CC These are used for both ex vivo or in vivo therapeutic applications where
CC neural regeneration is desirable, such as in Alzheimer's disease,
CC Parkinson's disease or other debilitating neurodegenerative diseases. The
CC present sequence represents rat prokineticin 2 (PK2), which may be used
CC in the method of the invention to modulate neurogenesis.
XX
SQ Sequence 81 AA;

Query Match 96.5%; Score 445; DB 8; Length 81;
Best Local Similarity 95.1%; Pred. No. 1.6e-39;
Matches 77; Conservative 4; Mismatches 0; Indels 0; Gaps 0;

Qy 1 AVITGACDKDSQCGGGMCCAVSIWVKSIRICTPMGKLGDSCHPLTRKVPFFGRRMHHTCP 60
Db 1 AVITGACDKDSQCGGGMCCAVSIWVKSIRICTPMGQVGDSCHPLTRKVPFWGRRMHHTCP 60

Qy 61 CLPGLACLRTSFNRFICLAQK 81
Db 61 CLPGLACLRTSFNRFICLARK 81

RESULT 32
ABG94408
ID ABG94408 standard; protein; 107 AA.
XX
AC ABG94408;
XX
DT 27-NOV-2002 (first entry)
XX
DE Mouse GPCR ligand Bv8 protein.
XX
KW G-protein coupled receptor; GPCR; ZAQ; human; ZAQC; ZAQT; rat; ZAQ1;
KW rZAQ1; rZAQ2; mouse; I5E receptor; mI5E; GPR73; Bv8 protein; MIT1;
KW digestive disorder; central nervous system disorder; CNS; diarrhoea;
KW bowel inflammation; constipation; food absorption disorder; nootropic;
KW Alzheimer's disease; Parkinson's disease; schizophrenia; laxative;
KW antiinflammatory; antidiarrhoeic; neuroleptic; neuroprotective; receptor.
XX
OS Mus sp.
XX
PN WO200262944-A2.
XX
PD 15-AUG-2002.
XX
PF 01-FEB-2002; 2002WO-JP000852.
XX
PR 02-FEB-2001; 2001JP-00026820.
XX
PA (TAKE) TAKEDA CHEM IND LTD.
XX
PI Ohtaki T, Masuda Y, Takatsu Y, Watanabe T, Terao Y, Shintani Y;
PI Hinuma S;

```
XX
DR   WPI; 2002-627537/67.
DR   N-PSDB; ABS71130.
XX
PT   Screening of compounds modifying the binding of G-protein coupled
PT   receptor protein ZAQ and related proteins to their ligands for use in
PT   treatment and diagnosis of digestive disorders.
XX
PS   Disclosure; Page 189; 197pp; Japanese.
XX
CC   The present invention relates to a screening method for compounds for
CC   their ability to modify the binding of G-protein coupled receptor (GPCR)
CC   protein ZAQ and related proteins (human ZAQC, human ZAQT, rat ZAQ1
CC   (rZAQ1), rZAQ2, human and mouse I5E (mI5E) receptor, and mouse GPR73) to
CC   their ligands (the mature form of human, mouse or rat Bv8 protein). The
CC   receptor protein and ligand are contacted in the presence or absence of
CC   the test compound. The compounds are useful in a drug composition for the
CC   treatment, and prevention of digestive and central nervous system (CNS)
CC   disorders, including bowel inflammation, diarrhoea, constipation, food
CC   absorption disorders, Alzheimer's disease, Parkinson's disease and
CC   schizophrenia. The present sequence represents a GPCR or related protein
XX
SQ   Sequence 107 AA;

  Query Match             96.5%;  Score 445;  DB 5;  Length 107;
  Best Local Similarity   95.1%;  Pred. No. 2.1e-39;
  Matches   77;  Conservative    4;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 AVITGACDKDSQCGGGMCCAVSIWVKSIRICTPMGKLGDSCHPLTRKVPFFGRRMHHTCP 60
              ||||||||||||||||||||||||||||||||||||::|||||||||||||:|||||||||
Db         27 AVITGACDKDSQCGGGMCCAVSIWVKSIRICTPMGQVGDSCHPLTRKVPFWGRRMHHTCP 86

Qy         61 CLPGLACLRTSFNRFICLAQK 81
              |||||||||||||||||||:|
Db         87 CLPGLACLRTSFNRFICLARK 107


RESULT 33
ABG94401
ID   ABG94401 standard; protein; 107 AA.
XX
AC   ABG94401;
XX
DT   27-NOV-2002  (first entry)
XX
DE   Rat GPCR ligand Bv8 protein sequence #1.
XX
KW   G-protein coupled receptor; GPCR; ZAQ; human; ZAQC; ZAQT; rat; ZAQ1;
KW   rZAQ1; rZAQ2; mouse; I5E receptor; mI5E; GPR73; Bv8 protein; MIT1;
KW   digestive disorder; central nervous system disorder; CNS; diarrhoea;
KW   bowel inflammation; constipation; food absorption disorder; nootropic;
KW   Alzheimer's disease; Parkinson's disease; schizophrenia; laxative;
KW   antiinflammatory; antidiarrhoeic; neuroleptic; neuroprotective; receptor.
XX
OS   Rattus sp.
XX
PN   WO200262944-A2.
XX
PD   15-AUG-2002.
XX
PF   01-FEB-2002; 2002WO-JP000852.
XX
PR   02-FEB-2001; 2001JP-00026820.
XX
PA   (TAKE ) TAKEDA CHEM IND LTD.
XX
PI   Ohtaki T,  Masuda Y,  Takatsu Y,  Watanabe T,  Terao Y,  Shintani Y;
PI   Hinuma S;
XX
DR   WPI; 2002-627537/67.
DR   N-PSDB; ABS71119.
XX
PT   Screening of compounds modifying the binding of G-protein coupled
PT   receptor protein ZAQ and related proteins to their ligands for use in
PT   treatment and diagnosis of digestive disorders.
XX
PS   Claim 6; Page 172-173; 197pp; Japanese.
XX
CC   The present invention relates to a screening method for compounds for
CC   their ability to modify the binding of G-protein coupled receptor (GPCR)
CC   protein ZAQ and related proteins (human ZAQC, human ZAQT, rat ZAQ1
CC   (rZAQ1), rZAQ2, human and mouse I5E (mI5E) receptor, and mouse GPR73) to
CC   their ligands (the mature form of human, mouse or rat Bv8 protein). The
CC   receptor protein and ligand are contacted in the presence or absence of
CC   the test compound. The compounds are useful in a drug composition for the
CC   treatment, and prevention of digestive and central nervous system (CNS)
CC   disorders, including bowel inflammation, diarrhoea, constipation, food
CC   absorption disorders, Alzheimer's disease, Parkinson's disease and
CC   schizophrenia. The present sequence represents a GPCR or related protein
XX
SQ   Sequence 107 AA;

  Query Match             96.5%;  Score 445;  DB 5;  Length 107;
  Best Local Similarity   95.1%;  Pred. No. 2.1e-39;
  Matches   77;  Conservative    4;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 AVITGACDKDSQCGGGMCCAVSIWVKSIRICTPMGKLGDSCHPLTRKVPFFGRRMHHTCP 60
              ||||||||||||||||||||||||||||||||||||::|||||||||||||:|||||||||
Db         27 AVITGACDKDSQCGGGMCCAVSIWVKSIRICTPMGQVGDSCHPLTRKVPFWGRRMHHTCP 86

Qy         61 CLPGLACLRTSFNRFICLAQK 81
              |||||||||||||||||||:|
Db         87 CLPGLACLRTSFNRFICLARK 107


RESULT 34
ABB06962
ID   ABB06962 standard; protein; 107 AA.
XX
AC   ABB06962;
XX
DT   19-JUN-2002  (first entry)
XX
DE   Rat G protein-coupled receptor protein sequence SEQ ID NO:69.
XX
KW   Rat; rZAQ1; rZAQ2; G protein-coupled receptor; GPCR; antidiarrheic;
KW   laxative; drug development; digestive organ disease; colitis; diarrhoea;
KW   constipation; malabsorption syndrome; diagnosis; gene therapy.
XX
OS   Rattus sp.
XX
PN   WO200216607-A1.
XX
PD   28-FEB-2002.
XX
PF   23-AUG-2001; 2001WO-JP007209.
XX
PR   24-AUG-2000; 2000JP-00253862.
XX
PA   (TAKE ) TAKEDA CHEM IND LTD.
XX
PI   Terao Y,  Shintani Y;
XX
DR   WPI; 2002-269361/31.
DR   N-PSDB; ABL50714.
XX
PT   Human and rat brain-originated G protein-coupled receptor proteins and
PT   encoded DNAs, for developing drugs to treat diseases of the digestive
PT   organs, e.g. colitis, diarrhea, constipation and mal-absorption syndrome.
XX
PS   Example 5; Page 127; 135pp; Japanese.
XX
CC   The present invention describes human and rat brain-originated G protein-
CC   coupled receptor (GPCR) proteins. The GPCR sequences have antidiarrheic
CC   and laxative activities. The GPCR sequences can be used for developing
CC   drugs to treat diseases of the digestive organs, e.g. colitis, diarrhoea,
```

```
CC   constipation and malabsorption syndrome, including gene diagnosis and
CC   therapy. The present sequence represents a rat GPCR protein sequence,
CC   which is used in an example from the present invention
XX
SQ   Sequence 107 AA;

  Query Match             96.5%;  Score 445;  DB 5;  Length 107;
  Best Local Similarity   95.1%;  Pred. No. 2.1e-39;
  Matches   77;  Conservative    4;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 AVITGACDKDSQCGGGMCCAVSIWVKSIRICTPMGKLGDSCHPLTRKVPFFGRRMHHTCP 60
              ||||||||||||||||||||||||||||||||||::|||||||||||||:|||||||||
Db         27 AVITGACDKDSQCGGGMCCAVSIWVKSIRICTPMGQVGDSCHPLTRKVPFWGRRMHHTCP 86

Qy         61 CLPGLACLRTSFNRFICLAQK 81
              |||||||||||||||||:|
Db         87 CLPGLACLRTSFNRFICLARK 107


RESULT 35
AAE36790
ID   AAE36790 standard; protein; 107 AA.
XX
AC   AAE36790;
XX
DT   07-AUG-2003  (first entry)
XX
DE   Mouse Bv8 homologue protein.
XX
KW   Mouse; cell proliferation; cancer; lipoid congenital adrenal hyperplasia;
KW   Bv8; androgen-dependent tumour; precocious puberty; sexual maturation;
KW   adrenal-hypoplasia congenita; infertility; hypogonadotropic hypogonadism;
KW   McCune-Albright syndrome; cytostatic; angiogenic.
XX
OS   Mus musculus.
XX
FH   Key             Location/Qualifiers
FT   Peptide         1. .20
FT                   /label= Signal-peptide
FT   Protein         21. .107
FT                   /note= "Mouse mature Bv8 homologue protein"
FT   Modified-site   40. .45
FT                   /note= "Myristoylation site"
FT   Modified-site   41. .46
FT                   /note= "Myristoylation site"
FT   Modified-site   42. .47
FT                   /note= "Myristoylation site"
FT   Modified-site   77. .80
FT                   /note= "Amidation site"
XX
PN   WO2003020892-A2.
XX
PD   13-MAR-2003.
XX
PF   27-AUG-2002; 2002WO-US027571.
XX
PR   29-AUG-2001; 2001US-0316184P.
XX
PA   (GETH ) GENENTECH INC.
XX
PI   Ferrara N,  Le Couter J;
XX
DR   WPI; 2003-290180/28.
DR   N-PSDB; AAD55708.
XX
PT   Inducing proliferation of endothelial cells or enhancing cell survival,
PT   by contacting the cells with Bv8 or introducing nucleic acid encoding Bv8
PT   into cells to induce proliferation or to enhance survival of the cells.
XX
PS   Claim 9; Fig 6; 87pp; English.
XX
CC   The present invention relates to a novel method of inducing proliferation
CC   of endothelial cells or enhancing cell survival, involving contacting the
CC   cells with Bv8 or introducing a nucleic acid encoding Bv8 into the cells
CC   to induce proliferation or to enhance survival of the cells. The method
CC   is useful for inducing proliferation of endothelial cells and to enhance
CC   cell survival, where the cells are vascular endothelial cells, especially
CC   steroidogenic endothelial cells. It is useful for inhibiting endothelial
CC   cell proliferation, for treating cancer (e.g., hormone-dependent cancer
CC   or cancer of the reproductive organs, especially testicular cancer) in
CC   mammals preferably human. The method of the invention is also useful for
CC   treating a condition associated with hormone producing tissue in mammals,
CC   where the condition is associated with hormone producing tissue which is
CC   selected from lipoid congenital adrenal hyperplasia, infertility, sexual
CC   maturation, androgen-dependent tumours, precocious puberty, adrenal-
CC   hypoplasia congenita, McCune-Albright syndrome and hypogonadotropic
CC   hypogonadism. The present sequence is mouse Bv8 homologue protein
XX
SQ   Sequence 107 AA;

  Query Match             96.5%;  Score 445;  DB 6;  Length 107;
  Best Local Similarity   95.1%;  Pred. No. 2.1e-39;
  Matches   77;  Conservative    4;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 AVITGACDKDSQCGGGMCCAVSIWVKSIRICTPMGKLGDSCHPLTRKVPFFGRRMHHTCP 60
              ||||||||||||||||||||||||||||||||||::|||||||||||||:|||||||||
Db         27 AVITGACDKDSQCGGGMCCAVSIWVKSIRICTPMGQVGDSCHPLTRKVPFWGRRMHHTCP 86

Qy         61 CLPGLACLRTSFNRFICLAQK 81
              |||||||||||||||||:|
Db         87 CLPGLACLRTSFNRFICLARK 107


RESULT 36
ADD69059
ID   ADD69059 standard; protein; 107 AA.
XX
AC   ADD69059;
XX
DT   15-JAN-2004  (first entry)
XX
DE   Rat Bv8-related protein - SEQ ID 37.
XX
KW   angiogenesis inhibitor; cytostatic; antiinflammatory; cancer;
KW   ovarian disease; diabetic retinopathy; inflammatory; ZAQ; Bv8; I5E; rat.
XX
OS   Rattus sp.
XX
PN   WO2003066860-A1.
XX
PD   14-AUG-2003.
XX
PF   03-FEB-2003; 2003WO-JP001057.
XX
PR   04-FEB-2002; 2002JP-00027299.
XX
PA   (TAKE ) TAKEDA CHEM IND LTD.
XX
PI   Ohtaki T,  Masuda Y,  Takatsu Y;
XX
DR   WPI; 2003-646310/61.
DR   N-PSDB; ADD69060.
XX
PT   Angiogenesis inhibitors for treatment and prevention of cancer, ovarian
PT   diseases and inflammatory disease.
XX
PS   Example 3; SEQ ID NO 37; 308pp; Japanese.
XX
CC   The invention relates to a novel angiogenesis inhibitor comprising a
CC   compound that inhibits the activity of an amino acid sequence given in
CC   the specification. Angiogenesis-related proteins Bv8, ZAQ and I5E were
CC   utilised within the method of the invention. The molecules of the
CC   invention demonstrate cytostatic and antiinflammatory activities whilst
CC   the method may be useful for treatment and prevention of cancer, ovarian
CC   diseases, diabetic retinopathy and inflammatory disease. The current
CC   sequence is that of the rat Bv8-related protein of the invention.
```

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XX
SQ   Sequence 107 AA;

  Query Match             96.5%;  Score 445;  DB 7;  Length 107;
  Best Local Similarity   95.1%;  Pred. No. 2.1e-39;
  Matches   77;  Conservative    4;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 AVITGACDKDSQCGGGMCCAVSIWVKSIRICTPMGKLGDSCHPLTRKVPFFGRRMHHTCP 60
              ||||||||||||||||||||||||||||||||||::|||||||||||||:|||||||||
Db         27 AVITGACDKDSQCGGGMCCAVSIWVKSIRICTPMGQVGDSCHPLTRKVPFWGRRMHHTCP 86

Qy         61 CLPGLACLRTSFNRFICLAQK 81
              ||||||||||||||||||:|
Db         87 CLPGLACLRTSFNRFICLARK 107


RESULT 37
ADD69077
ID   ADD69077 standard; protein; 107 AA.
XX
AC   ADD69077;
XX
DT   15-JAN-2004  (first entry)
XX
DE   Murine Bv8-related protein - SEQ ID 55.
XX
KW   angiogenesis inhibitor; cytostatic; antiinflammatory; cancer;
KW   ovarian disease; diabetic retinopathy; inflammatory; ZAQ; Bv8; I5E;
KW   murine; mouse.
XX
OS   Mus sp.
XX
PN   WO2003066860-A1.
XX
PD   14-AUG-2003.
XX
PF   03-FEB-2003; 2003WO-JP001057.
XX
PR   04-FEB-2002; 2002JP-00027299.
XX
PA   (TAKE ) TAKEDA CHEM IND LTD.
XX
PI   Ohtaki T,  Masuda Y,  Takatsu Y;
XX
DR   WPI; 2003-646310/61.
DR   N-PSDB; ADD69078.
XX
PT   Angiogenesis inhibitors for treatment and prevention of cancer, ovarian
PT   diseases and inflammatory disease.
XX
PS   Disclosure; SEQ ID NO 55; 308pp; Japanese.
XX
CC   The invention relates to a novel angiogenesis inhibitor comprising a
CC   compound that inhibits the activity of an amino acid sequence given in
CC   the specification. Angiogenesis-related proteins Bv8, ZAQ and I5E were
CC   utilised within the method of the invention. The molecules of the
CC   invention demonstrate cytostatic and antiinflammatory activities whilst
CC   the method may be useful for treatment and prevention of cancer, ovarian
CC   diseases, diabetic retinopathy and inflammatory disease. The current
CC   sequence is that of the murine Bv8-related protein of the invention.
XX
SQ   Sequence 107 AA;

  Query Match             96.5%;  Score 445;  DB 7;  Length 107;
  Best Local Similarity   95.1%;  Pred. No. 2.1e-39;
  Matches   77;  Conservative    4;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 AVITGACDKDSQCGGGMCCAVSIWVKSIRICTPMGKLGDSCHPLTRKVPFFGRRMHHTCP 60
              ||||||||||||||||||||||||||||||||||::|||||||||||||:|||||||||
Db         27 AVITGACDKDSQCGGGMCCAVSIWVKSIRICTPMGQVGDSCHPLTRKVPFWGRRMHHTCP 86

Qy         61 CLPGLACLRTSFNRFICLAQK 81
              ||||||||||||||||||:|
Db         87 CLPGLACLRTSFNRFICLARK 107


RESULT 38
ADS00462
ID   ADS00462 standard; protein; 107 AA.
XX
AC   ADS00462;
XX
DT   16-DEC-2004  (first entry)
XX
DE   Murine Bv8 homologue, SEQ ID 6.
XX
KW   Cytostatic; Antimicrobial; Anti-HIV; Immunostimulant; Antibacterial;
KW   Antiinflammatory; Gastrointestinal; Neuroprotective; Muscular;
KW   Antipsoriatic; Antiarthritic; Antirheumatic; Antithyroid; Hepatotropic;
KW   Virucide; Antidiabetic; Antianemic; haematopoiesis; autoimmune disorder;
KW   Bv8; Endocrine Gland derived Vascular Endothelial Growth Factor; EG-VEGF;
KW   hematological disorder; leukaemia; myeloproliferative disorder;
KW   myelodysplastic disorder; lymphoproliferative disorder;
KW   lymphodysplastic disorder; immunodeficiency disorder; HIV infection;
KW   neutropenia; bacterial infection; lymphopaenia; autoimmune disorder;
KW   inflammatory bowel disease; Crohn's disease; colitis; lupus;
KW   multiple sclerosis; myasthenia gravis; optic neuritis; psoriasis;
KW   rheumatoid arthritis; Graves Disease; autoimmune hepatitis;
KW   type I diabetes; aplastic anaemia; murine.
XX
OS   Mus musculus.
XX
PN   WO2004081229-A2.
XX
PD   23-SEP-2004.
XX
PF   12-MAR-2004; 2004WO-US007622.
XX
PR   12-MAR-2003; 2003US-0454462P.
PR   14-OCT-2003; 2003US-0511390P.
XX
PA   (GETH ) GENENTECH INC.
XX
PI   Ferrara N,  Lecouter J;
XX
DR   WPI; 2004-690608/67.
DR   N-PSDB; ADS00461.
XX
PT   Treating disorder associated with abnormal hematopoiesis or autoimmune
PT   disorder by administering antagonist of small protein obtained from
PT   Bombina variegata or endocrine gland derived vascular endothelial growth
PT   factor, to mammal.
XX
PS   Claim 53; SEQ ID NO 6; 161pp; English.
XX
CC   The present invention relates to a method (M1) for treating a disorder
CC   associated with abnormal haematopoiesis or an autoimmune disorder in a
CC   mammal. The method comprises administering antagonists for Bv8 or
CC   Endocrine Gland derived Vascular Endothelial Growth Factor (EG-VEGF) to
CC   the mammal. Bv8 and EG-VEGF are homologues of Vascular Endothelial Growth
CC   Factor (VEGF), an angiogenic factor known to have an important role in
CC   tumour growth and survival. (M1) is useful for treating abnormal
CC   haematopoiesis such as a hematological disorder e.g., leukaemia,
CC   myeloproliferative disorder, myelodysplastic disorder,
CC   lymphoproliferative disorder, or lymphodysplastic disorder. The leukaemia
CC   is acute myeloid leukaemia, chronic myelogenous leukaemia, or acute
CC   lymphodysplastic leukaemia. (M1) is useful for treating immunodeficiency
CC   disorder such as primary immunodeficiency disorder, B lymphocyte
CC   disorder, T lymphocyte disorder, secondary immunodeficiency disorder, or
CC   a condition associated with chemotherapy. The immunodeficiency disorder
CC   is a condition associated with an infectious disease (HIV infection). The
CC   immunodeficiency disorder is a condition associated with leukaemia,
CC   myeloproliferative disorder, or myelodysplastic disorder. (M1) is useful
CC   for treating neutropenia, which is associated with an infectious disease
CC   (bacterial infection). (M1) is useful for treating lymphopaenia or
CC   autoimmune disorder such as inflammatory bowel disease, Crohn's disease,
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CC   colitis, lupus, multiple sclerosis, myasthenia gravis, optic neuritis,
CC   psoriasis, rheumatoid arthritis, Graves Disease, autoimmune hepatitis,
CC   type I diabetes or aplastic anaemia. The present sequence is a murine Bv8
CC   sequence used to illustrate the method of the invention.
XX
SQ   Sequence 107 AA;

  Query Match             96.5%;  Score 445;  DB 8;  Length 107;
  Best Local Similarity   95.1%;  Pred. No. 2.1e-39;
  Matches   77;  Conservative    4;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 AVITGACDKDSQCGGGMCCAVSIWVKSIRICTPMGKLGDSCHPLTRKVPFFGRRMHHTCP 60
              ||||||||||||||||||||||||||||||||::|||||||||||||:|||||||||
Db         27 AVITGACDKDSQCGGGMCCAVSIWVKSIRICTPMGQVGDSCHPLTRKVPFWGRRMHHTCP 86

Qy         61 CLPGLACLRTSFNRFICLAQK 81
              |||||||||||||||||:|
Db         87 CLPGLACLRTSFNRFICLARK 107


RESULT 39
ADN43257
ID   ADN43257 standard; protein; 102 AA.
XX
AC   ADN43257;
XX
DT   15-JUL-2004  (first entry)
XX
DE   Amino acid sequence of human prokineticin 2 (PK2) isoform 1.
XX
KW   neurogenesis; prokineticin receptor; PKR; neural stem; progenitor cell;
KW   neural regeneration; Alzheimer's disease; Parkinson's disease;
KW   neurodegenerative disease; prokineticin 2; PK2.
XX
OS   Homo sapiens.
XX
PN   WO2004032851-A2.
XX
PD   22-APR-2004.
XX
PF   03-OCT-2003; 2003WO-US031626.
XX
PR   04-OCT-2002; 2002US-0416202P.
XX
PA   (REGC ) UNIV CALIFORNIA.
XX
PI   Zhou Q,  Cheng MY;
XX
DR   WPI; 2004-340794/31.
XX
PT   Identifying a compound that modulates neurogenesis comprises contacting a
PT   neural stem or progenitor cell with a compound that modulates
PT   prokineticin receptor signaling and determining its ability to modulate
PT   neurogenesis.
XX
PS   Claim 26; Fig 6B; 103pp; English.
XX
CC   The specification describes a method for identifying a compound that
CC   modulates neurogenesis. The method comprises providing a compound that
CC   modulates prokineticin receptor (PKR) signaling, contacting a neural stem
CC   or progenitor cell with the compound, and determining the ability of the
CC   compound to modulate neurogenesis. The method is useful for modulating
CC   neurogenesis or for identifying compounds that modulate neurogenesis.
CC   These are used for both ex vivo or in vivo therapeutic applications where
CC   neural regeneration is desirable, such as in Alzheimer's disease,
CC   Parkinson's disease or other debilitating neurodegenerative diseases. The
CC   present sequence represents human prokineticin 2 (PK2) isoform 1, which
CC   may be used in the method of the invention to modulate neurogenesis.
XX
SQ   Sequence 102 AA;

  Query Match             95.6%;  Score 440.5;  DB 8;  Length 102;
  Best Local Similarity   79.4%;  Pred. No. 6e-39;
  Matches   81;  Conservative    0;  Mismatches    0;  Indels   21;  Gaps    1;

Qy          1 AVITGACDKDSQCGGGMCCAVSIWVKSIRICTPMGKLGDSCHPLTRK------------ 47
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Db          1 AVITGACDKDSQCGGGMCCAVSIWVKSIRICTPMGKLGDSCHPLTRKNNFGNGRQERRKR 60

Qy         48 --------VPFFGRRMHHTCPCLPGLACLRTSFNRFICLAQK 81
                     ||||||||||||||||||||||||||||||||||
Db         61 KRSKRKKEVPFFGRRMHHTCPCLPGLACLRTSFNRFICLAQK 102


RESULT 40
ADJ71808
ID   ADJ71808 standard; protein; 124 AA.
XX
AC   ADJ71808;
XX
DT   06-MAY-2004  (first entry)
XX
DE   Human Bv8 protein.
XX
KW   laxative; antiinflammatory; neuroprotective; nootropic; antiparkinsonian;
KW   antirheumatic; antiarthritic; antidiabetic; antiallergic; antiasthmatic;
KW   vulnerary; cytostatic; antibacterial; virucide; gene therapy;
KW   prokineticin; diagnostics; forensics; gene mapping; drug screening;
KW   biodiversity; impaired gastrointestinal motility; chronic constipation;
KW   diabetic gastroparesis; irritable bowel syndrome; postoperational ileus;
KW   angiogenesis; neovascularization; heart; sperm disorder; azoospermia;
KW   neurodegenerative disease; Alzheimer's disease; Parkinson's disease;
KW   autoimmune disorder; rheumatoid arthritis; diabetes; allergy; asthma;
KW   wounds; cancer.
XX
OS   Homo sapiens.
XX
PN   WO2003040326-A2.
XX
PD   15-MAY-2003.
XX
PF   04-NOV-2002; 2002WO-US035465.
XX
PR   02-NOV-2001; 2001US-0343902P.
XX
PA   (HYSE-) HYSEQ INC.
XX
PI   Ghosh MJ,  Tang TY,  Liu C,  Drmanac RT;
XX
DR   WPI; 2003-441552/41.
XX
PT   New prokineticin-like polynucleotide and polypeptide for diagnosing,
PT   preventing or treating impaired gastrointestinal motility, cancer or
PT   neurodegenerative or autoimmune disorders, and for gene mapping or drug
PT   screening.
XX
PS   Disclosure; SEQ ID NO 14; 132pp; English.
XX
CC   The invention relates to novel prokineticin-like polypeptides and
CC   polynucleotides. The polynucleotide and polypeptide are useful in
CC   diagnostics, forensics, gene mapping, drug screening, identification of
CC   mutations responsible for genetic disorders or traits, to assess
CC   biodiversity, and to produce many other types of data and products
CC   dependent on DNA and amino acid sequences. The polynucleotide and
CC   polypeptide may also be used for treating diseases due to impaired
CC   gastrointestinal motility (e.g. chronic constipation, diabetic
CC   gastroparesis, irritable bowel syndrome or postoperational ileus), for
CC   regulating angiogenesis and neovascularization, as well as growth and
CC   development in heart and other tissues, for treating sperm disorders
CC   including azoospermia, neurodegenerative diseases (e.g. Alzheimer's
CC   disease or Parkinson's disease), autoimmune disorders (e.g. rheumatoid
CC   arthritis, diabetes, allergy or asthma), wounds, cancer or infections.
CC   This sequence corresponds to a protein which has similarity to the novel
CC   prokineticin-like proteins of the invention.
XX
SQ   Sequence 124 AA;
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Query Match 95.6%; Score 440.5; DB 7; Length 124;
Best Local Similarity 79.4%; Pred. No. 7.2e-39;
Matches 81; Conservative 0; Mismatches 0; Indels 21; Gaps 1;

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Qy          1 AVITGACDKDSQCGGGMCCAVSIWVKSIRICTPMGKLGDSCHPLTRK------------ 47
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Db         23 AVITGACDKDSQCGGGMCCAVSIWVKSIRICTPMGKLGDSCHPLTRKNNFGNGRQERRKR 82

Qy         48 --------VPFFGRRMHHTCPCLPGLACLRTSFNRFICLAQK 81
                     |||||||||||||||||||||||||||||||||||
Db         83 KRSKRKKEVPFFGRRMHHTCPCLPGLACLRTSFNRFICLAQK 124
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Search completed: November 7, 2005, 20:56:10
Job time : 116.467 secs

GenCore version 5.1.6

OM protein - protein search, using sw model

Run on: November 7, 2005, 20:49:21 ; Search time 29.1018 Seconds
(without alignments)
207.773 Million cell updates/sec

Title: US-10-811-328-6
Perfect score: 461
Sequence: 1 AVITGACDKDSQCGGGMCCA.....LPGLACLRTSFNRFICLAQK 81

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 513545 seqs, 74649064 residues

Total number of hits satisfying chosen parameters: 513545

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : Issued_Patents_AA:*
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2: /cgn2_6/ptodata/1/iaa/5B_COMB.pep:*
3: /cgn2_6/ptodata/1/iaa/6A_COMB.pep:*
4: /cgn2_6/ptodata/1/iaa/6B_COMB.pep:*
5: /cgn2_6/ptodata/1/iaa/PCTUS_COMB.pep:*
6: /cgn2_6/ptodata/1/iaa/backfiles1.pep:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1	461	100.0	108	4	US-09-712-529-2	Sequence 2, Appli
2	461	100.0	108	4	US-10-212-201A-2	Sequence 2, Appli
3	461	100.0	108	4	US-10-212-355-2	Sequence 2, Appli
4	291	63.1	105	4	US-09-712-529-5	Sequence 5, Appli
5	291	63.1	105	4	US-10-212-201A-5	Sequence 5, Appli
6	291	63.1	105	4	US-10-212-355-5	Sequence 5, Appli
7	284	61.6	105	4	US-09-621-976-5350	Sequence 5350, Ap
8	256	55.5	80	4	US-09-513-999C-4698	Sequence 4698, Ap
9	101.5	22.0	224	3	US-09-161-241-14	Sequence 14, Appl
10	100	21.7	266	3	US-09-161-241-10	Sequence 10, Appl
11	100	21.7	266	4	US-09-976-594-1086	Sequence 1086, Ap
12	98	21.3	259	3	US-09-161-241-11	Sequence 11, Appl
13	97	21.0	186	4	US-09-949-016-7146	Sequence 7146, Ap
14	97	21.0	207	3	US-09-161-241-13	Sequence 13, Appl
15	97	21.0	259	3	US-09-161-241-12	Sequence 12, Appl
16	97	21.0	259	4	US-09-949-016-6872	Sequence 6872, Ap
17	95	20.6	350	3	US-09-161-241-9	Sequence 9, Appli
18	95	20.6	350	4	US-09-907-794A-236	Sequence 236, App
19	95	20.6	350	4	US-09-905-125A-236	Sequence 236, App
20	95	20.6	350	4	US-09-902-775A-236	Sequence 236, App
21	95	20.6	350	4	US-09-906-700-236	Sequence 236, App
22	95	20.6	350	4	US-09-903-603A-236	Sequence 236, App
23	95	20.6	350	4	US-09-904-920A-236	Sequence 236, App
24	95	20.6	350	4	US-09-909-064-236	Sequence 236, App
25	95	20.6	350	4	US-09-905-381A-236	Sequence 236, App
26	95	20.6	350	4	US-09-906-618-236	Sequence 236, App
27	95	20.6	375	4	US-09-949-016-7856	Sequence 7856, Ap
28	95	20.6	375	4	US-09-949-016-7857	Sequence 7857, Ap
29	95	20.6	375	4	US-09-949-016-7858	Sequence 7858, Ap
30	90.5	19.6	349	3	US-09-161-241-8	Sequence 8, Appli
31	73.5	15.9	299	3	US-09-188-930-192	Sequence 192, App
32	73.5	15.9	299	3	US-09-188-930-332	Sequence 332, App
33	73.5	15.9	299	4	US-09-312-283C-192	Sequence 192, App
34	73.5	15.9	299	4	US-09-312-283C-332	Sequence 332, App
35	73	15.8	122	4	US-09-489-847-189	Sequence 189, App
36	73	15.8	1587	4	US-09-845-583A-10	Sequence 10, Appl
37	73	15.8	1587	4	US-09-561-709B-3	Sequence 3, Appli
38	71.5	15.5	179	4	US-09-148-545-177	Sequence 177, App
39	71.5	15.5	2471	1	US-08-185-432-16	Sequence 16, Appl
40	71.5	15.5	2471	1	US-08-083-590A-19	Sequence 19, Appl
41	71.5	15.5	2471	3	US-08-532-384-19	Sequence 19, Appl
42	71.5	15.5	2471	4	US-08-899-232-1	Sequence 1, Appli
43	71.5	15.5	2471	4	US-09-121-457-1	Sequence 1, Appli
44	70.5	15.3	1576	4	US-09-562-702A-24	Sequence 24, Appl
45	70.5	15.3	1576	4	US-09-561-818A-24	Sequence 24, Appl

ALIGNMENTS

RESULT 1
US-09-712-529-2
; Sequence 2, Application US/09712529
; Patent No. 6485938
; GENERAL INFORMATION:
; APPLICANT: Sheppard, Paul O.
; APPLICANT: Bishop, Paul D.
; APPLICANT: Whitmore, Theodore E.
; APPLICANT: Thompson, Penny P.
; TITLE OF INVENTION: Human Zven Proteins
; FILE REFERENCE: 99-81
; CURRENT APPLICATION NUMBER: US/09/712,529
; CURRENT FILING DATE: 2000-11-14
; NUMBER OF SEQ ID NOS: 7
; SOFTWARE: FastSEQ for Windows Version 3.0
; SEQ ID NO 2
; LENGTH: 108
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-712-529-2

Query Match 100.0%; Score 461; DB 4; Length 108;
Best Local Similarity 100.0%; Pred. No. 7.1e-44;
Matches 81; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Qy          1 AVITGACDKDSQCGGGMCCAVSIWVKSIRICTPMGKLGDSCHPLTRKVPFFGRRMHHTCP 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         28 AVITGACDKDSQCGGGMCCAVSIWVKSIRICTPMGKLGDSCHPLTRKVPFFGRRMHHTCP 87

Qy         61 CLPGLACLRTSFNRFICLAQK 81
              |||||||||||||||||||||
Db         88 CLPGLACLRTSFNRFICLAQK 108
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RESULT 2
US-10-212-201A-2
; Sequence 2, Application US/10212201A
; Patent No. 6756479
; GENERAL INFORMATION:
; APPLICANT: Sheppard, Paul O.
; APPLICANT: Bishop, Paul D.
; APPLICANT: Whitmore, Theodore E.
; APPLICANT: Thompson, Penny P.
; TITLE OF INVENTION: Human Zven Proteins
; FILE REFERENCE: 99-81
; CURRENT APPLICATION NUMBER: US/10/212,201A
; CURRENT FILING DATE: 2002-08-02
; PRIOR APPLICATION NUMBER: US/09/712,529
; PRIOR FILING DATE: 2000-11-14
; NUMBER OF SEQ ID NOS: 7

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;  SOFTWARE: FastSEQ for Windows Version 3.0
; SEQ ID NO 2
;   LENGTH: 108
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-10-212-201A-2

  Query Match             100.0%;  Score 461;  DB 4;  Length 108;
  Best Local Similarity   100.0%;  Pred. No. 7.1e-44;
  Matches   81;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 AVITGACDKDSQCGGGMCCAVSIWVKSIRICTPMGKLGDSCHPLTRKVPFFGRRMHHTCP 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         28 AVITGACDKDSQCGGGMCCAVSIWVKSIRICTPMGKLGDSCHPLTRKVPFFGRRMHHTCP 87

Qy         61 CLPGLACLRTSFNRFICLAQK 81
              |||||||||||||||||||||
Db         88 CLPGLACLRTSFNRFICLAQK 108


RESULT 3
US-10-212-355-2
; Sequence 2, Application US/10212355
; Patent No. 6828425
; GENERAL INFORMATION:
;  APPLICANT: Sheppard, Paul O.
;  APPLICANT:  Bishop, Paul D.
;  APPLICANT:  Whitmore, Theodore E.
;  APPLICANT:  Thompson, Penny P.
;  TITLE OF INVENTION: Human Zven Proteins
;  FILE REFERENCE: 99-81
;  CURRENT APPLICATION NUMBER: US/10/212,355
;  CURRENT FILING DATE:  2002-08-02
;  NUMBER OF SEQ ID NOS: 7
;  SOFTWARE: FastSEQ for Windows Version 3.0
; SEQ ID NO 2
;   LENGTH: 108
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-10-212-355-2

  Query Match             100.0%;  Score 461;  DB 4;  Length 108;
  Best Local Similarity   100.0%;  Pred. No. 7.1e-44;
  Matches   81;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 AVITGACDKDSQCGGGMCCAVSIWVKSIRICTPMGKLGDSCHPLTRKVPFFGRRMHHTCP 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         28 AVITGACDKDSQCGGGMCCAVSIWVKSIRICTPMGKLGDSCHPLTRKVPFFGRRMHHTCP 87

Qy         61 CLPGLACLRTSFNRFICLAQK 81
              |||||||||||||||||||||
Db         88 CLPGLACLRTSFNRFICLAQK 108


RESULT 4
US-09-712-529-5
; Sequence 5, Application US/09712529
; Patent No. 6485938
; GENERAL INFORMATION:
;  APPLICANT:  Sheppard, Paul O.
;  APPLICANT:  Bishop, Paul D.
;  APPLICANT:  Whitmore, Theodore E.
;  APPLICANT:  Thompson, Penny P.
;  TITLE OF INVENTION:  Human Zven Proteins
;  FILE REFERENCE:  99-81
;  CURRENT APPLICATION NUMBER: US/09/712,529
;  CURRENT FILING DATE:  2000-11-14
;  NUMBER OF SEQ ID NOS:  7
;  SOFTWARE:  FastSEQ for Windows Version 3.0
; SEQ ID NO 5
;   LENGTH: 105
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-09-712-529-5

  Query Match             63.1%;  Score 291;  DB 4;  Length 105;
  Best Local Similarity   58.4%;  Pred. No. 4.8e-25;
  Matches   45;  Conservative   14;  Mismatches   18;  Indels    0;  Gaps    0;

Qy          1 AVITGACDKDSQCGGGMCCAVSIWVKSIRICTPMGKLGDSCHPLTRKVPFFGRRMHHTCP 60
              |||||||::| ||| | |||:|:|:: :|:|||:|: |: ||| : ||||| :| |||||
Db         20 AVITGACERDVQCGAGTCCAISLWLRGLRMCTPLGREGEECHPGSHKVPFFRKRKHHTCP 79

Qy         61 CLPGLACLRTSFNRFIC 77
              ||| | | |    |: |
Db         80 CLPNLLCSRFPDGRYRC 96


RESULT 5
US-10-212-201A-5
; Sequence 5, Application US/10212201A
; Patent No. 6756479
; GENERAL INFORMATION:
;  APPLICANT: Sheppard, Paul O.
;  APPLICANT:  Bishop, Paul D.
;  APPLICANT:  Whitmore, Theodore E.
;  APPLICANT:  Thompson, Penny P.
;  TITLE OF INVENTION: Human Zven Proteins
;  FILE REFERENCE: 99-81
;  CURRENT APPLICATION NUMBER: US/10/212,201A
;  CURRENT FILING DATE:  2002-08-02
;  PRIOR APPLICATION NUMBER: US/09/712,529
;  PRIOR FILING DATE: 2000-11-14
;  NUMBER OF SEQ ID NOS: 7
;  SOFTWARE: FastSEQ for Windows Version 3.0
; SEQ ID NO 5
;   LENGTH: 105
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-10-212-201A-5

  Query Match             63.1%;  Score 291;  DB 4;  Length 105;
  Best Local Similarity   58.4%;  Pred. No. 4.8e-25;
  Matches   45;  Conservative   14;  Mismatches   18;  Indels    0;  Gaps    0;

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              |||||||::| ||| | |||:|:|:: :|:|||:|: |: ||| : ||||| :| |||||
Db         20 AVITGACERDVQCGAGTCCAISLWLRGLRMCTPLGREGEECHPGSHKVPFFRKRKHHTCP 79

Qy         61 CLPGLACLRTSFNRFIC 77
              ||| | | |    |: |
Db         80 CLPNLLCSRFPDGRYRC 96


RESULT 6
US-10-212-355-5
; Sequence 5, Application US/10212355
; Patent No. 6828425
; GENERAL INFORMATION:
;  APPLICANT: Sheppard, Paul O.
;  APPLICANT:  Bishop, Paul D.
;  APPLICANT:  Whitmore, Theodore E.
;  APPLICANT:  Thompson, Penny P.
;  TITLE OF INVENTION: Human Zven Proteins
;  FILE REFERENCE: 99-81
;  CURRENT APPLICATION NUMBER: US/10/212,355
;  CURRENT FILING DATE:  2002-08-02
;  NUMBER OF SEQ ID NOS: 7
;  SOFTWARE: FastSEQ for Windows Version 3.0
; SEQ ID NO 5
;   LENGTH: 105
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-10-212-355-5

  Query Match             63.1%;  Score 291;  DB 4;  Length 105;
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  Best Local Similarity   58.4%;  Pred. No. 4.8e-25;
  Matches   45;  Conservative   14;  Mismatches   18;  Indels    0;  Gaps    0;

Qy          1 AVITGACDKDSQCGGGMCCAVSIWVKSIRICTPMGKLGDSCHPLTRKVPFFGRRMHHTCP 60
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Db         20 AVITGACERDVQCGAGTCCAISLWLRGLRMCTPLGREGEECHPGSHKVPFFRKRKHHTCP 79

Qy         61 CLPGLACLRTSFNRFIC 77
              ||| | | |    |: |
Db         80 CLPNLLCSRFPDGRYRC 96


RESULT 7
US-09-621-976-5350
; Sequence 5350, Application US/09621976
; Patent No. 6639063
; GENERAL INFORMATION:
;  APPLICANT: Dumas Milne Edwards, J.B.
;  APPLICANT:  Jobert, S.
;  APPLICANT:  Giordano, J.Y.
;  TITLE OF INVENTION: ESTs and Encoded Human Proteins.
;  FILE REFERENCE: GENSET.054PR2
;  CURRENT APPLICATION NUMBER: US/09/621,976
;  CURRENT FILING DATE:  2000-07-21
;  NUMBER OF SEQ ID NOS: 19335
;  SOFTWARE: Patent.pm
; SEQ ID NO 5350
;   LENGTH: 105
;   TYPE: PRT
;   ORGANISM: Homo sapiens
;   FEATURE:
;   NAME/KEY: SIGNAL
;   LOCATION: -19..-1
;   NAME/KEY: UNSURE
;   LOCATION: 38
;   OTHER INFORMATION: Xaa = Ala,Gly
US-09-621-976-5350

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  Best Local Similarity   55.8%;  Pred. No. 2.8e-24;
  Matches   43;  Conservative   15;  Mismatches   19;  Indels    0;  Gaps    0;

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              |||||||::| ||| | |||:|:|:: :|:|||:|:  : ||| : |:||| :| |||||
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Qy         61 CLPGLACLRTSFNRFIC 77
              ||| | | |    |: |
Db         80 CLPNLLCSRFPDGRYRC 96


RESULT 8
US-09-513-999C-4698
; Sequence 4698, Application US/09513999C
; Patent No. 6783961
; GENERAL INFORMATION:
;  APPLICANT: Dumas Milne Edwards, J.B.
;  APPLICANT:  Duclert, A.
;  APPLICANT:  Giordano, J.Y.
;  TITLE OF INVENTION: Expressed Sequence Tags and Encoded Human Proteins.
; Patent No. 6783961
;  FILE REFERENCE: 59.US2.REG
;  CURRENT APPLICATION NUMBER: US/09/513,999C
;  CURRENT FILING DATE:  2000-02-24
;  PRIOR APPLICATION NUMBER: US 60/122,487
;  PRIOR FILING DATE: 1999-02-26
;  NUMBER OF SEQ ID NOS: 36681
;  SOFTWARE: Patent.pm
; SEQ ID NO 4698
;   LENGTH: 80
;   TYPE: PRT
;   ORGANISM: Homo sapiens
;   FEATURE:
;   NAME/KEY: SIGNAL
;   LOCATION: -19..-1
;   OTHER INFORMATION: score 7.2
;   OTHER INFORMATION: seq VSIMLLLVTVSDC/AV
US-09-513-999C-4698

  Query Match             55.5%;  Score 256;  DB 4;  Length 80;
  Best Local Similarity   60.7%;  Pred. No. 2.7e-21;
  Matches   37;  Conservative   14;  Mismatches   10;  Indels    0;  Gaps    0;

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Db         20 AVITGACERDVQCGAGTCCAISLWLRGLRMCTPLGREGEECHPGSHKIPFFRKRKHHTCP 79

Qy         61 C 61
              |
Db         80 C 80


RESULT 9
US-09-161-241-14
; Sequence 14, Application US/09161241
; Patent No. 6344541
; GENERAL INFORMATION:
;  APPLICANT: Bass, Michael B
;  APPLICANT: Sullivan, John K
;  APPLICANT: Theill, Lars E
;  APPLICANT: Wang, Daguang
;  TITLE OF INVENTION: NOVEL DKR POLYPEPTIDES
;  FILE REFERENCE: A-548
;  CURRENT APPLICATION NUMBER: US/09/161,241
;  CURRENT FILING DATE: 1998-09-25
;  NUMBER OF SEQ ID NOS: 78
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 14
;   LENGTH: 224
;   TYPE: PRT
;   ORGANISM: Human
US-09-161-241-14

  Query Match             22.0%;  Score 101.5;  DB 3;  Length 224;
  Best Local Similarity   36.4%;  Pred. No. 0.001;
  Matches   24;  Conservative    6;  Mismatches   25;  Indels   11;  Gaps    3;

Qy          6 ACDKDSQCGGGMCCAVSIWVKSIRICTPMGKLGDSC----HPLTRKVPFFGRRMHHTCPC 61
              :| :   || |:|||   | |   || |:   |  |    |  | : |   :|    | |
Db        144 SCLRTFDCGPGLCCARHFWTK---ICKPVLLEGQVCSRRGHKDTAQAPEIFQR----CDC 196

Qy         62 LPGLAC 67
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Db        197 GPGLLC 202


RESULT 10
US-09-161-241-10
; Sequence 10, Application US/09161241
; Patent No. 6344541
; GENERAL INFORMATION:
;  APPLICANT: Bass, Michael B
;  APPLICANT: Sullivan, John K
;  APPLICANT: Theill, Lars E
;  APPLICANT: Wang, Daguang
;  TITLE OF INVENTION: NOVEL DKR POLYPEPTIDES
;  FILE REFERENCE: A-548
;  CURRENT APPLICATION NUMBER: US/09/161,241
;  CURRENT FILING DATE: 1998-09-25
;  NUMBER OF SEQ ID NOS: 78
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 10
;   LENGTH: 266
;   TYPE: PRT
;   ORGANISM: Human
US-09-161-241-10
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Query Match 21.7%; Score 100; DB 3; Length 266;
Best Local Similarity 37.7%; Pred. No. 0.0018;
Matches 23; Conservative 5; Mismatches 29; Indels 4; Gaps 2;

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Qy          7 CDKDSQCGGGMCCAVSIWVKSIRICTPMGKLGDSCHPLTRKVPFFGRRMHHTCPCLPGLA 66
              | : | |  |:|||   | |   || |: | |  |    ||    |  :   | |  ||:
Db        189 CLRSSDCASGLCCARHFWSK---ICKPVLKEGQVCTKHRRK-GSHGLEIFQRCYCGEGLS 244

Qy         67 C 67
              |
Db        245 C 245
```

RESULT 11
US-09-976-594-1086
; Sequence 1086, Application US/09976594
; Patent No. 6673549
; GENERAL INFORMATION:
; APPLICANT: Furness, Michael
; APPLICANT: Buchbinder, Jenny
; TITLE OF INVENTION: GENES EXPRESSED IN C3A LIVER CELL CULTURES TREATED WITH STEROIDS
; FILE REFERENCE: PA-0041 US
; CURRENT APPLICATION NUMBER: US/09/976,594
; CURRENT FILING DATE: 2001-10-12
; PRIOR APPLICATION NUMBER: 60/240,409
; PRIOR FILING DATE: 2000-10-12
; NUMBER OF SEQ ID NOS: 1143
; SOFTWARE: PERL Program
; SEQ ID NO 1086
; LENGTH: 266
; TYPE: PRT
; ORGANISM: Homo sapiens
; FEATURE:
; NAME/KEY: misc_feature
; OTHER INFORMATION: Incyte ID No. 6673549 2481150CD1
US-09-976-594-1086

Query Match 21.7%; Score 100; DB 4; Length 266;
Best Local Similarity 37.7%; Pred. No. 0.0018;
Matches 23; Conservative 5; Mismatches 29; Indels 4; Gaps 2;

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Qy          7 CDKDSQCGGGMCCAVSIWVKSIRICTPMGKLGDSCHPLTRKVPFFGRRMHHTCPCLPGLA 66
              | : | |  |:|||   | |   || |: | |  |    ||    |  :   | |  ||:
Db        189 CLRSSDCASGLCCARHFWSK---ICKPVLKEGQVCTKHRRK-GSHGLEIFQRCYCGEGLS 244

Qy         67 C 67
              |
Db        245 C 245
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RESULT 12
US-09-161-241-11
; Sequence 11, Application US/09161241
; Patent No. 6344541
; GENERAL INFORMATION:
; APPLICANT: Bass, Michael B
; APPLICANT: Sullivan, John K
; APPLICANT: Theill, Lars E
; APPLICANT: Wang, Daguang
; TITLE OF INVENTION: NOVEL DKR POLYPEPTIDES
; FILE REFERENCE: A-548
; CURRENT APPLICATION NUMBER: US/09/161,241
; CURRENT FILING DATE: 1998-09-25
; NUMBER OF SEQ ID NOS: 78
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 11
; LENGTH: 259
; TYPE: PRT
; ORGANISM: Mouse
US-09-161-241-11

Query Match 21.3%; Score 98; DB 3; Length 259;
Best Local Similarity 36.1%; Pred. No. 0.0029;
Matches 22; Conservative 5; Mismatches 30; Indels 4; Gaps 2;

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Qy          7 CDKDSQCGGGMCCAVSIWVKSIRICTPMGKLGDSCHPLTRKVPFFGRRMHHTCPCLPGLA 66
              | : | |  | |||   | |   || |:   |: |    ||    |  :   | |  ||:
Db        183 CLRSSDCIDGFCCARHFWTK---ICKPVLHQGEVC-TKQRKKGSHGLEIFQRCDCAKGLS 238

Qy         67 C 67
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Db        239 C 239
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RESULT 13
US-09-949-016-7146
; Sequence 7146, Application US/09949016
; Patent No. 6812339
; GENERAL INFORMATION:
; APPLICANT: VENTER, J. Craig et al.
; TITLE OF INVENTION: POLYMORPHISMS IN KNOWN GENES ASSOCIATED
; TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF
; FILE REFERENCE: CL001307
; CURRENT APPLICATION NUMBER: US/09/949,016
; CURRENT FILING DATE: 2000-04-14
; PRIOR APPLICATION NUMBER: 60/241,755
; PRIOR FILING DATE: 2000-10-20
; PRIOR APPLICATION NUMBER: 60/237,768
; PRIOR FILING DATE: 2000-10-03
; PRIOR APPLICATION NUMBER: 60/231,498
; PRIOR FILING DATE: 2000-09-08
; NUMBER OF SEQ ID NOS: 207012
; SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 7146
; LENGTH: 186
; TYPE: PRT
; ORGANISM: Human
US-09-949-016-7146

Query Match 21.0%; Score 97; DB 4; Length 186;
Best Local Similarity 36.1%; Pred. No. 0.0027;
Matches 22; Conservative 5; Mismatches 30; Indels 4; Gaps 2;

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Qy          7 CDKDSQCGGGMCCAVSIWVKSIRICTPMGKLGDSCHPLTRKVPFFGRRMHHTCPCLPGLA 66
              | : | |  | |||   | |   || |:   |: |    ||    |  :   | |  ||:
Db        110 CLRSSDCIEGFCCARHFWTK---ICKPVLHQGEVC-TKQRKKGSHGLEIFQRCDCAKGLS 165

Qy         67 C 67
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Db        166 C 166
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RESULT 14
US-09-161-241-13
; Sequence 13, Application US/09161241
; Patent No. 6344541
; GENERAL INFORMATION:
; APPLICANT: Bass, Michael B
; APPLICANT: Sullivan, John K
; APPLICANT: Theill, Lars E
; APPLICANT: Wang, Daguang
; TITLE OF INVENTION: NOVEL DKR POLYPEPTIDES
; FILE REFERENCE: A-548
; CURRENT APPLICATION NUMBER: US/09/161,241
; CURRENT FILING DATE: 1998-09-25
; NUMBER OF SEQ ID NOS: 78
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 13
; LENGTH: 207
; TYPE: PRT
; ORGANISM: Human
US-09-161-241-13

Query Match 21.0%; Score 97; DB 3; Length 207;
Best Local Similarity 36.1%; Pred. No. 0.003;

GenCore version 5.1.6

OM protein - protein search, using sw model

Run on: November 7, 2005, 20:52:11 ; Search time 109.617 Seconds
(without alignments)
309.179 Million cell updates/sec

Title: US-10-811-328-6
Perfect score: 461
Sequence: 1 AVITGACDKDSQCGGGMCCA.....LPGLACLRTSFNRFICLAQK 81

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 1867879 seqs, 418409474 residues

Total number of hits satisfying chosen parameters: 1867879

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : Published_Applications_AA:*
1: /cgn2_6/ptodata/1/pubpaa/US07_PUBCOMB.pep:*
2: /cgn2_6/ptodata/1/pubpaa/PCT_NEW_PUB.pep:*
3: /cgn2_6/ptodata/1/pubpaa/US06_NEW_PUB.pep:*
4: /cgn2_6/ptodata/1/pubpaa/US06_PUBCOMB.pep:*
5: /cgn2_6/ptodata/1/pubpaa/US07_NEW_PUB.pep:*
6: /cgn2_6/ptodata/1/pubpaa/PCTUS_PUBCOMB.pep:*
7: /cgn2_6/ptodata/1/pubpaa/US08_NEW_PUB.pep:*
8: /cgn2_6/ptodata/1/pubpaa/US08_PUBCOMB.pep:*
9: /cgn2_6/ptodata/1/pubpaa/US09A_PUBCOMB.pep:*
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11: /cgn2_6/ptodata/1/pubpaa/US09C_PUBCOMB.pep:*
12: /cgn2_6/ptodata/1/pubpaa/US09_NEW_PUB.pep:*
13: /cgn2_6/ptodata/1/pubpaa/US10A_PUBCOMB.pep:*
14: /cgn2_6/ptodata/1/pubpaa/US10B_PUBCOMB.pep:*
15: /cgn2_6/ptodata/1/pubpaa/US10C_PUBCOMB.pep:*
16: /cgn2_6/ptodata/1/pubpaa/US10D_PUBCOMB.pep:*
17: /cgn2_6/ptodata/1/pubpaa/US10E_PUBCOMB.pep:*
18: /cgn2_6/ptodata/1/pubpaa/US10_NEW_PUB.pep:*
19: /cgn2_6/ptodata/1/pubpaa/US11A_PUBCOMB.pep:*
20: /cgn2_6/ptodata/1/pubpaa/US11_NEW_PUB.pep:*
21: /cgn2_6/ptodata/1/pubpaa/US60_NEW_PUB.pep:*
22: /cgn2_6/ptodata/1/pubpaa/US60_PUBCOMB.pep:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1	461	100.0	81	13	US-10-016-481-6	Sequence 6, Appli
2	461	100.0	81	14	US-10-323-157-6	Sequence 6, Appli
3	461	100.0	81	15	US-10-417-426-5	Sequence 5, Appli
4	461	100.0	81	15	US-10-467-019-19	Sequence 19, Appl
5	461	100.0	81	16	US-10-680-554-7	Sequence 7, Appli
6	461	100.0	81	16	US-10-713-567-6	Sequence 6, Appli
7	461	100.0	81	17	US-10-811-328-6	Sequence 6, Appli
8	461	100.0	81	17	US-10-912-907-6	Sequence 6, Appli
9	461	100.0	81	17	US-10-415-724-6	Sequence 6, Appli
10	461	100.0	81	18	US-10-977-113-9	Sequence 9, Appli
11	461	100.0	81	18	US-10-871-152-18	Sequence 18, Appl
12	461	100.0	81	18	US-10-503-554A-19	Sequence 19, Appl
13	461	100.0	100	9	US-09-886-242A-4	Sequence 4, Appli
14	461	100.0	100	13	US-10-027-603-4	Sequence 4, Appli
15	461	100.0	100	17	US-10-692-299-4	Sequence 4, Appli
16	461	100.0	108	13	US-10-016-481-5	Sequence 5, Appli
17	461	100.0	108	14	US-10-231-411-4	Sequence 4, Appli
18	461	100.0	108	14	US-10-212-355-2	Sequence 2, Appli
19	461	100.0	108	14	US-10-323-157-5	Sequence 5, Appli
20	461	100.0	108	14	US-10-212-201-2	Sequence 2, Appli
21	461	100.0	108	15	US-10-467-019-17	Sequence 17, Appl
22	461	100.0	108	16	US-10-680-755A-2	Sequence 2, Appli
23	461	100.0	108	16	US-10-680-800A-2	Sequence 2, Appli
24	461	100.0	108	16	US-10-713-567-5	Sequence 5, Appli
25	461	100.0	108	17	US-10-811-328-5	Sequence 5, Appli
26	461	100.0	108	17	US-10-912-907-5	Sequence 5, Appli
27	461	100.0	108	17	US-10-415-724-5	Sequence 5, Appli
28	461	100.0	108	18	US-10-990-246-2	Sequence 2, Appli
29	461	100.0	108	18	US-10-503-554A-17	Sequence 17, Appl
30	461	100.0	108	18	US-10-982-168-2	Sequence 2, Appli
31	461	100.0	116	16	US-10-680-755A-26	Sequence 26, Appl
32	461	100.0	116	16	US-10-680-800A-26	Sequence 26, Appl
33	456	98.9	80	15	US-10-467-019-22	Sequence 22, Appl
34	456	98.9	80	18	US-10-503-554A-22	Sequence 22, Appl
35	450	97.6	108	16	US-10-713-567-34	Sequence 34, Appl
36	450	97.6	108	18	US-10-977-113-6	Sequence 6, Appli
37	445	96.5	81	15	US-10-417-426-7	Sequence 7, Appli
38	445	96.5	81	15	US-10-467-019-39	Sequence 39, Appl
39	445	96.5	81	16	US-10-362-504-71	Sequence 71, Appl
40	445	96.5	81	16	US-10-680-554-9	Sequence 9, Appli
41	445	96.5	81	16	US-10-680-554-11	Sequence 11, Appl
42	445	96.5	81	16	US-10-713-567-29	Sequence 29, Appl
43	445	96.5	81	16	US-10-713-567-31	Sequence 31, Appl
44	445	96.5	81	17	US-10-811-328-29	Sequence 29, Appl
45	445	96.5	81	17	US-10-811-328-31	Sequence 31, Appl

ALIGNMENTS

RESULT 1
US-10-016-481-6
; Sequence 6, Application US/10016481
; Publication No. US20020115610A1
; GENERAL INFORMATION:
; APPLICANT: Zhou, Qun-Yong
; APPLICANT: Ehlert, Frederick
; TITLE OF INVENTION: Prokineticin Polypeptides, Related
; TITLE OF INVENTION: Compositions and Methods
; FILE REFERENCE: P-UC 5016
; CURRENT APPLICATION NUMBER: US/10/016,481
; CURRENT FILING DATE: 2001-11-01
; PRIOR APPLICATION NUMBER: 60/245,882
; PRIOR FILING DATE: 2000-11-03
; NUMBER OF SEQ ID NOS: 19
; SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 6
; LENGTH: 81
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-016-481-6

Query Match 100.0%; Score 461; DB 13; Length 81;
Best Local Similarity 100.0%; Pred. No. 9.6e-44;
Matches 81; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Qy          1 AVITGACDKDSQCGGGMCCAVSIWVKSIRICTPMGKLGDSCHPLTRKVPFFGRRMHHTCP 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 AVITGACDKDSQCGGGMCCAVSIWVKSIRICTPMGKLGDSCHPLTRKVPFFGRRMHHTCP 60

Qy         61 CLPGLACLRTSFNRFICLAQK 81
              |||||||||||||||||||||
Db         61 CLPGLACLRTSFNRFICLAQK 81
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RESULT 2
US-10-323-157-6
; Sequence 6, Application US/10323157
; Publication No. US20030113867A1
; GENERAL INFORMATION:
;  APPLICANT: Zhou, Qun-Yong
;  APPLICANT:  Ehlert, Frederick
;  TITLE OF INVENTION: Prokineticin Polypeptides, Related
;  TITLE OF INVENTION:  Compositions and Methods
;  FILE REFERENCE: P-UC 5016
;  CURRENT APPLICATION NUMBER: US/10/323,157
;  CURRENT FILING DATE:  2002-12-18
;  PRIOR APPLICATION NUMBER: US/10/016,481
;  PRIOR FILING DATE: 2001-11-01
;  PRIOR APPLICATION NUMBER: 60/245,882
;  PRIOR FILING DATE: 2000-11-03
;  NUMBER OF SEQ ID NOS: 19
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 6
;   LENGTH: 81
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-10-323-157-6

  Query Match             100.0%;  Score 461;  DB 14;  Length 81;
  Best Local Similarity   100.0%;  Pred. No. 9.6e-44;
  Matches   81;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 AVITGACDKDSQCGGGMCCAVSIWVKSIRICTPMGKLGDSCHPLTRKVPFFGRRMHHTCP 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 AVITGACDKDSQCGGGMCCAVSIWVKSIRICTPMGKLGDSCHPLTRKVPFFGRRMHHTCP 60

Qy         61 CLPGLACLRTSFNRFICLAQK 81
              |||||||||||||||||||||
Db         61 CLPGLACLRTSFNRFICLAQK 81


RESULT 3
US-10-417-426-5
; Sequence 5, Application US/10417426
; Publication No. US20030235535A1
; GENERAL INFORMATION:
;  APPLICANT: Zhou, Qun-Yong
;  APPLICANT:  Bullock, Clayton M.
;  TITLE OF INVENTION: Screening and Therapeutic Methods For
;  TITLE OF INVENTION:  Treating Circadian Rhythm Disorders
;  FILE REFERENCE: P-UC 5773
;  CURRENT APPLICATION NUMBER: US/10/417,426
;  CURRENT FILING DATE:  2003-04-15
;  PRIOR APPLICATION NUMBER: US 60/372,836
;  PRIOR FILING DATE: 2002-04-15
;  NUMBER OF SEQ ID NOS: 21
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 5
;   LENGTH: 81
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-10-417-426-5

  Query Match             100.0%;  Score 461;  DB 15;  Length 81;
  Best Local Similarity   100.0%;  Pred. No. 9.6e-44;
  Matches   81;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 AVITGACDKDSQCGGGMCCAVSIWVKSIRICTPMGKLGDSCHPLTRKVPFFGRRMHHTCP 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 AVITGACDKDSQCGGGMCCAVSIWVKSIRICTPMGKLGDSCHPLTRKVPFFGRRMHHTCP 60

Qy         61 CLPGLACLRTSFNRFICLAQK 81
              |||||||||||||||||||||
Db         61 CLPGLACLRTSFNRFICLAQK 81


RESULT 4
US-10-467-019-19
; Sequence 19, Application US/10467019
; Publication No. US20040048314A1
; GENERAL INFORMATION:
;  APPLICANT: Takeda Chemical Industries, Ltd.
;  TITLE OF INVENTION: No. US20040048314A1el Phisiological Active Peptide and Its Use
;  FILE REFERENCE: P01-0295PCT
;  CURRENT APPLICATION NUMBER: US/10/467,019
;  CURRENT FILING DATE:  2003-08-01
;  PRIOR APPLICATION NUMBER: JP2001-026820
;  PRIOR FILING DATE: 2001-02-02
;  NUMBER OF SEQ ID NOS: 71
; SEQ ID NO 19
;   LENGTH: 81
;   TYPE: PRT
;   ORGANISM: Human
US-10-467-019-19

  Query Match             100.0%;  Score 461;  DB 15;  Length 81;
  Best Local Similarity   100.0%;  Pred. No. 9.6e-44;
  Matches   81;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 AVITGACDKDSQCGGGMCCAVSIWVKSIRICTPMGKLGDSCHPLTRKVPFFGRRMHHTCP 60
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Db          1 AVITGACDKDSQCGGGMCCAVSIWVKSIRICTPMGKLGDSCHPLTRKVPFFGRRMHHTCP 60

Qy         61 CLPGLACLRTSFNRFICLAQK 81
              |||||||||||||||||||||
Db         61 CLPGLACLRTSFNRFICLAQK 81


RESULT 5
US-10-680-554-7
; Sequence 7, Application US/10680554
; Publication No. US20040229291A1
; GENERAL INFORMATION:
;  APPLICANT: Zhou, Qun-Yong
;  APPLICANT:  Cheng, Michelle Y.
;  TITLE OF INVENTION: Screening and Therapeutic Methods
;  TITLE OF INVENTION:  Relating to Neurogenesis
;  FILE REFERENCE: 66778-356
;  CURRENT APPLICATION NUMBER: US/10/680,554
;  CURRENT FILING DATE:  2003-10-03
;  PRIOR APPLICATION NUMBER: US 60/416,202
;  PRIOR FILING DATE: 2002-10-04
;  NUMBER OF SEQ ID NOS: 21
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 7
;   LENGTH: 81
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-10-680-554-7

  Query Match             100.0%;  Score 461;  DB 16;  Length 81;
  Best Local Similarity   100.0%;  Pred. No. 9.6e-44;
  Matches   81;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 AVITGACDKDSQCGGGMCCAVSIWVKSIRICTPMGKLGDSCHPLTRKVPFFGRRMHHTCP 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 AVITGACDKDSQCGGGMCCAVSIWVKSIRICTPMGKLGDSCHPLTRKVPFFGRRMHHTCP 60

Qy         61 CLPGLACLRTSFNRFICLAQK 81
              |||||||||||||||||||||
Db         61 CLPGLACLRTSFNRFICLAQK 81


RESULT 6
US-10-713-567-6
; Sequence 6, Application US/10713567
; Publication No. US20040235732A1
; GENERAL INFORMATION:
;  APPLICANT: Zhou, Qun-Yong
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GenCore version 5.1.6

OM protein - protein search, using sw model

Run on: November 7, 2005, 20:48:31 ; Search time 23.2814 Seconds
(without alignments)
334.754 Million cell updates/sec

Title: US-10-811-328-6
Perfect score: 461
Sequence: 1 AVITGACDKDSQCGGGMCCA.....LPGLACLRTSFNRFICLAQK 81

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 283416 seqs, 96216763 residues

Total number of hits satisfying chosen parameters: 283416

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

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1: pir1:*
2: pir2:*
3: pir3:*
4: pir4:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1	95	20.6	350	2	JC7188	REIC protein - hum
2	76.5	16.6	1574	2	T13954	MEGF6 protein - ra
3	76	16.5	3712	2	S18253	laminin alpha-1 ch
4	74	16.1	264	2	T16271	hypothetical prote
5	73.5	15.9	2471	2	A49128	cell-fate determin
6	70.5	15.3	1609	1	MMHUB2	laminin gamma-1 ch
7	70	15.2	850	2	S56015	gastric mucin MUC5
8	68.5	14.9	1220	2	A56136	jagged protein pre
9	68	14.8	313	2	S08198	cytochrome-c3 hydr
10	67.5	14.6	1687	2	T30176	EGF repeat transme
11	67	14.5	314	1	HQDVSG	cytochrome-c3 hydr
12	66.5	14.4	3075	2	S14458	laminin alpha-1 ch
13	66	14.3	112	2	I51909	colipase precursor
14	65.5	14.2	1599	2	T16210	hypothetical prote
15	65.5	14.2	1620	2	T27283	hypothetical prote
16	65.5	14.2	2195	2	T34264	hypothetical prote
17	65	14.1	112	1	XLHU	colipase precursor
18	65	14.1	4135	2	T42629	tenascin-X - bovin
19	64.5	14.0	2318	2	S45306	notch 3 protein -
20	64	13.9	131	1	KRSHA3	keratin high-sulfu
21	64	13.9	257	2	I38025	keratin-like prote
22	64	13.9	1722	2	E89753	protein F11C7.4 [i
23	64	13.9	1955	1	AGCH	agrin precursor -
24	63.5	13.8	2321	2	S78549	notch3 protein - h
25	63.5	13.8	3871	2	T22812	hypothetical prote
26	63	13.7	143	2	B21761	high cysteine chor
27	63	13.7	442	2	S50062	cell wall glycopro
28	63	13.7	1522	2	H88380	protein T22F7.3 [i
29	63	13.7	2150	2	T32497	hypothetical prote
30	63	13.7	3566	1	A40701	tenascin-X precurs
31	63	13.7	13288	2	T03099	mucin, submaxillar
32	62.5	13.6	109	2	S67091	probable membrane
33	62.5	13.6	1959	1	AGRT	agrin - rat
34	62.5	13.6	3635	2	T10053	laminin alpha 5 ch
35	62	13.4	178	2	A23219	high-cysteine chor
36	62	13.4	250	1	A49053	CD27 antigen precu
37	62	13.4	297	2	H69609	hypothetical prote
38	62	13.4	825	2	S55060	fertilin alpha-II
39	62	13.4	905	2	S55059	fertilin alpha-I -
40	62	13.4	2098	2	T18397	protein CTRP - mal
41	61.5	13.3	203	2	H75434	hypothetical prote
42	61.5	13.3	318	2	E87929	protein T22H2.6 [i
43	61.5	13.3	345	2	T25138	hypothetical prote
44	61.5	13.3	358	2	T25137	hypothetical prote
45	61.5	13.3	589	2	B38128	epithelin/granulin

ALIGNMENTS

RESULT 1
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REIC protein - human
C;Species: Homo sapiens (man)
C;Date: 04-Mar-2000 #sequence_revision 04-Mar-2000 #text_change 11-May-2000
C;Accession: JC7188
R;Tsugi, T.; Miyazaki, M.; Sakaguchi, M.; Inoue, Y.; Namba, M.
Biochem. Biophys. Res. Commun. 268, 20-24, 2000
A;Title: A REIC gene shows down-regulation in human immortalized cells and human tumor-
A;Reference number: JC7188; MUID:20119095; PMID:10652205
A;Accession: JC7188
A;Molecule type: mRNA
A;Residues: 1-350 <TSU>
A;Cross-references: DDBJ:AB034203
A;Experimental source: heart
C;Comment: This protein is a secreted glycoprotein for head induction in amphibian embr
C;Genetics:
A;Gene: reic
C;Superfamily: human REIC protein
C;Keywords: cardiac muscle; coiled coil; glycoprotein; heart; tumor

Query Match 20.6%; Score 95; DB 2; Length 350;
Best Local Similarity 29.5%; Pred. No. 0.0072;
Matches 23; Conservative 11; Mismatches 36; Indels 8; Gaps 4;

```
Qy          7 CDKDSQCGGGMCCAVSIWVKSIRICTPMGKLGDSCH-PLTRKVPFFGRRMH-----HTCP 60
              ||     |  |:|||    :    :|||:   |: || | :| :      :        ||
Db        208 CDNQRDCQPGLCCAFQRGL-LFPVCTPLPVEGELCHDPASRLLDLITWELEPDGALDRCP 266

Qy         61 CLPGLACLRTSFNR-FIC 77
               |  || |    | :  ::|
Db        267 CASGLLCQPHSHSPVYVC 284
```

RESULT 2
T13954
MEGF6 protein - rat
C;Species: Rattus norvegicus (Norway rat)
C;Date: 20-Sep-1999 #sequence_revision 20-Sep-1999 #text_change 09-Jul-2004
C;Accession: T13954
R;Nakayama, M.; Nakajima, D.; Nagase, T.; Nomura, N.; Seki, N.; Ohara, O.
Genomics 51, 27-34, 1998
A;Title: Identification of high-molecular-weight proteins with multiple EGF-like motifs
A;Reference number: Z14126; MUID:98360089; PMID:9693030
A;Accession: T13954
A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Molecule type: mRNA
A;Residues: 1-1574 <NAK>
A;Cross-references: UNIPROT:O88281; EMBL:AB011532; NID:g3449293; PIDN:BAA32462.1; PID:g
A;Experimental source: strain Sprague-Dawley; brain
C;Genetics:
A;Gene: MEGF6

Query Match 16.6%; Score 76.5; DB 2; Length 1574;
Best Local Similarity 33.8%; Pred. No. 2.5;
Matches 22; Conservative 2; Mismatches 28; Indels 13; Gaps 4;

```
Qy          7 CDKDSQCGGGMCCAVSIWVKSIRICTPMGKLG----DSCHPLTRKVPFFGRRMHHTCPCL 62
              ||    |  |  |     |    || | |: |     || |||     ||       | |
Db        960 CDSACNCSAGAPCDA---VTGSCIC-PAGRWGPRCAQSCPPLT-----FGLNCSQICTCF 1010

Qy         63 PGLAC 67
              | :|
Db       1011 NGASC 1015
```

RESULT 3
S18253
laminin alpha-1 chain precursor - fruit fly (Drosophila melanogaster)
C;Species: Drosophila melanogaster
C;Date: 16-Sep-1992 #sequence_revision 24-Jul-1997 #text_change 09-Jul-2004
C;Accession: S28399; S18253
R;Kusche-Gullberg, M.; Garrison, K.; MacKrell, A.J.; Fessler, L.I.; Fessler, J.H.
EMBO J. 11, 4519-4527, 1992
A;Title: Laminin A chain: expression during Drosophila development and genomic sequence.
A;Reference number: S28399; MUID:93049203; PMID:1425586
A;Accession: S28399
A;Status: preliminary
A;Molecule type: nucleic acid
A;Residues: 1-3712 <KUS>
A;Cross-references: UNIPROT:Q00174; GB:M96388; NID:g157799; PIDN:AAA28662.1; PID:g157800
R;Garrison, K.; MacKrell, A.J.; Fessler, J.H.
J. Biol. Chem. 266, 22899-22904, 1991
A;Title: Drosophila laminin A chain sequence, interspecies comparison, and domain struct
A;Reference number: S18253; MUID:92078147; PMID:1744083
A;Accession: S18253
A;Molecule type: mRNA
A;Residues: 1762-3712 <GAR>
A;Cross-references: EMBL:M75882; NID:g157797; PIDN:AAA28661.1; PID:g157798
C;Genetics:
A;Gene: FlyBase:LanA
A;Cross-references: FlyBase:FBgn0002526
C;Superfamily: laminin alpha-1 chain; laminin G repeat homology; laminin-type EGF-like h
C;Keywords: basement membrane; cell binding; coiled coil; disulfide bond; extracellular
F;273-330/Domain: laminin-type EGF-like homology <LEG>
F;333-400/Domain: laminin-type EGF-like homology <LE02>
F;541-584/Domain: laminin-type EGF-like homology <LEG1>
F;1776-2115/Domain: III <DOM3>
F;1776-1806/Domain: laminin-type EGF-like homology #status atypical <LE1>
F;1809-1856/Domain: laminin-type EGF-like homology <LE2>
F;1859-1914/Domain: laminin-type EGF-like homology <LE3>
F;1917-1967/Domain: laminin-type EGF-like homology <LE4>
F;1970-2014/Domain: laminin-type EGF-like homology <LE5>
F;2017-2061/Domain: laminin-type EGF-like homology <LE6>
F;2064-2109/Domain: laminin-type EGF-like homology <LE7>
F;2116-2697/Domain: I/II, heptad repeats <DOM2>
F;2698-3712/Domain: G <DOMG>
F;2698-2863/Domain: repeat G1 <RG1>
F;2864-3048/Domain: repeat G2 <RG2>
F;3049-3223/Domain: repeat G3 <RG3>
F;3079-3200/Domain: laminin G repeat homology <LG3>
F;3334-3528/Domain: repeat G4 <RG4>
F;3529-3712/Domain: repeat G5 <RG5>
F;1847,1850,1943,2024,2196,2215,2267,2301,2323,2482,2524,2538,2569,2699,2720,2890,2938,3

Query Match 16.5%; Score 76; DB 2; Length 3712;
Best Local Similarity 30.7%; Pred. No. 5.7;
Matches 27; Conservative 5; Mismatches 28; Indels 28; Gaps 5;

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Qy          4 TGACDKDSQCGGGMC--CAVSIWVKSIRICTPMG-----KLGDSCHPLTRKVPFFGRRMH 56
              || |   |   |  |  |||  |      |||         |  |:| | |
Db       2032 TGHCACKSGVTGRQCDRCAVDHWKYEKDGCTPCNCNQGYSRGFGCNPNTGK--------- 2082

Qy         57 HTCPCLPGL------ACLRTSFNRFICL 78
                | ||||:      ||     ||:: :
```

Db 2083 --CQCLPGVIGDRCDACP----NRWVLI 2104

RESULT 4
T16271
hypothetical protein F35D2.3 - Caenorhabditis elegans
C;Species: Caenorhabditis elegans
C;Date: 20-Sep-1999 #sequence_revision 20-Sep-1999 #text_change 09-Jul-2004
C;Accession: T16271
R;Connell, M.
submitted to the EMBL Data Library, June 1995
A;Description: The sequence of C. elegans cosmid F35D2.
A;Reference number: Z18488
A;Accession: T16271
A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Molecule type: DNA
A;Residues: 1-264 <CON>
A;Cross-references: UNIPROT:Q20043; EMBL:U28741; NID:g861290; PID:g861291; PIDN:AAA6832
A;Experimental source: strain Bristol N2
C;Genetics:
A;Gene: CESP:F35D2.3
A;Introns: 40/3; 71/3; 160/3; 197/3

Query Match 16.1%; Score 74; DB 2; Length 264;
Best Local Similarity 28.1%; Pred. No. 1;
Matches 25; Conservative 11; Mismatches 33; Indels 20; Gaps 5;

```
Qy          1 AVITGACD-----KDSQC-------GGGMCCAVSIWVKSIRICTPMGKLGDSCHPLTRKV 48
              ::: | |:     :  ||       ||    |     ::|   | |  || |  :|
Db         37 SIVNGKCECTLRYEGPQCERERCLNGGRRHSAKG----TVRCHCPYGLSGDRCEKVTYCE 92

Qy         49 PFFGRRMHHTCPCL---PGLAC-LRTSFN 73
              |  |: :   | |     || | :|| ||
Db         93 PGKGKLVEGKCECFERWTGLFCNMRTCFN 121
```

RESULT 5
A49128
cell-fate determining gene Notch2 protein - rat
C;Species: Rattus norvegicus (Norway rat)
C;Date: 21-Jan-1994 #sequence_revision 18-Nov-1994 #text_change 16-Aug-2004
C;Accession: A49128
R;Weinmaster, G.; Roberts, V.J.; Lemke, G.
Development 116, 931-941, 1992
A;Title: Notch2: a second mammalian Notch gene.
A;Reference number: A49128; MUID:93202015; PMID:1295745
A;Accession: A49128
A;Status: preliminary; not compared with conceptual translation
A;Molecule type: mRNA
A;Residues: 1-2471 <WEI>
A;Cross-references: UNIPROT:Q9QW30
A;Experimental source: Schwann cell
A;Note: sequence extracted from NCBI backbone (NCBIP:127811)
C;Superfamily: Notch protein; ankyrin repeat homology; EGF homology
F;264-295/Domain: EGF homology <EGX1>
F;799-830/Domain: EGF homology <EGF1>
F;877-908/Domain: EGF homology <EGX2>
F;1029-1060/Domain: EGF homology <EGF>
F;1067-1098/Domain: EGF homology <EGX3>
F;1153-1184/Domain: EGF homology <EGF3>
F;1191-1222/Domain: EGF homology <EGX4>
F;1876-1908/Domain: ankyrin repeat homology <AN1>
F;1909-1941/Domain: ankyrin repeat homology <AN2>
F;1943-1975/Domain: ankyrin repeat homology <AN3>
F;1976-2008/Domain: ankyrin repeat homology <AN4>
F;2009-2041/Domain: ankyrin repeat homology <AN5>

Query Match 15.9%; Score 73.5; DB 2; Length 2471;
Best Local Similarity 28.4%; Pred. No. 7.6;
Matches 21; Conservative 9; Mismatches 37; Indels 7; Gaps 2;

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Qy          7 CDKDSQCGGGMCCAVSIWVKSIRICTPMGKLGDSCHPLTRKVPFFGRRMHHTCPCLPGLA 66
              |:|:    || |   ::  |:   | | |  |: |   |    |  |       ||  |
```

GenCore version 5.1.6

OM protein - protein search, using sw model

Run on: November 7, 2005, 20:47:46 ; Search time 110.587 Seconds
(without alignments)
375.076 Million cell updates/sec

Title: US-10-811-328-6
Perfect score: 461
Sequence: 1 AVITGACDKDSQCGGGMCCA.....LPGLACLRTSFNRFICLAQK 81

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 1612378 seqs, 512079187 residues

Total number of hits satisfying chosen parameters: 1612378

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : UniProt_03:*
1: uniprot_sprot:*
2: uniprot_trembl:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1	445	96.5	107	1	PRK2_RAT	Q8r413 rattus norv
2	440.5	95.6	129	1	PRK2_HUMAN	Q9hc23 homo sapien
3	426	92.4	108	2	Q863H4	Q863h4 bos taurus
4	424.5	92.1	128	1	PRK2_MOUSE	Q9qxu7 mus musculu
5	424.5	92.1	128	2	Q6V8J7	Q6v8j7 rattus norv
6	406	88.1	128	2	Q863H5	Q863h5 bos taurus
7	312.5	67.8	81	1	VPRA_DENPO	P25687 dendroaspis
8	291	63.1	105	1	PRK1_HUMAN	P58294 homo sapien
9	290	62.9	105	2	Q8TC69	Q8tc69 homo sapien
10	286	62.0	105	1	PRK1_RAT	Q8r414 rattus norv
11	257	55.7	81	2	Q8K457	Q8k457 mus musculu
12	248.5	53.9	96	1	BV8_BOMVA	Q9pw66 bombina var
13	248.5	53.9	96	2	Q8JFQ0	Q8jfq0 bombina max
14	233.5	50.7	96	2	Q8JFE6	Q8jfe6 bombina max
15	232.5	50.4	96	2	Q8JFX9	Q8jfx9 bombina max
16	232.5	50.4	96	2	Q8JFY1	Q8jfy1 bombina max
17	230	49.9	96	2	Q8JFY0	Q8jfy0 bombina max
18	225.5	48.9	96	2	Q8JFX8	Q8jfx8 bombina max
19	218.5	47.4	96	2	Q8JFY2	Q8jfy2 bombina max
20	112.5	24.4	221	2	Q8VEJ3	Q8vej3 mus musculu
21	110	23.9	96	2	Q8UUX3	Q8uux3 gallus gall
22	103	22.3	272	1	DKK1_MOUSE	O54908 mus musculu
23	103	22.3	272	2	Q80UL5	Q80ul5 mus musculu
24	101.5	22.0	224	1	DKK4_HUMAN	Q9ubt3 homo sapien
25	100	21.7	240	2	Q9PWH3	Q9pwh3 brachydanio
26	100	21.7	266	1	DKK1_HUMAN	O94907 homo sapien
27	99	21.5	255	2	Q9DDA4	Q9dda4 xenopus lae
28	98	21.3	259	1	DKK2_MOUSE	Q9qyz8 mus musculu
29	98	21.3	259	2	Q8BFW0	Q8bfw0 m mus muscu
30	98	21.3	268	2	Q6PVU5	Q6pvu5 oryctolagus
31	97	21.0	259	1	DKK2_HUMAN	Q9ubu2 homo sapien
32	95	20.6	171	2	O43532	O43532 homo sapien
33	95	20.6	350	1	DKK3_HUMAN	Q9ubp4 homo sapien
34	94.5	20.5	215	2	Q8N294	Q8n294 homo sapien
35	92.5	20.1	350	1	DKK3_CHICK	Q90839 gallus gall
36	92	20.0	241	2	Q9W6D9	Q9w6d9 brachydanio
37	91.5	19.8	277	2	Q9ES33	Q9es33 rattus norv
38	90.5	19.6	349	1	DKK3_MOUSE	Q9qun9 mus musculu
39	90	19.5	259	2	O57464	O57464 xenopus lae
40	89	19.3	350	2	Q6PQ81	Q6pq81 homo sapien
41	81.5	17.7	564	2	Q9TTS4	Q9tts4 bos taurus
42	81.5	17.7	5146	2	Q8SPM4	Q8spm4 bos taurus
43	79.5	17.2	102	1	TXCA_CAEEX	Q8mtx1 caerostris
44	79.5	17.2	747	2	Q8VHF4	Q8vhf4 mus musculu
45	79.5	17.2	1004	2	Q8CGA7	Q8cga7 mus musculu

ALIGNMENTS

```
RESULT 1
PRK2_RAT
ID   PRK2_RAT       STANDARD;      PRT;   107 AA.
AC   Q8R413;
DT   28-FEB-2003 (Rel. 41, Created)
DT   28-FEB-2003 (Rel. 41, Last sequence update)
DT   05-JUL-2004 (Rel. 44, Last annotation update)
DE   Prokineticin 2 precursor (PK2).
GN   Name=Prok2; Synonyms=Bv8;
OS   Rattus norvegicus (Rat).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
OX   NCBI_TaxID=10116;
RN   [1]
RP   SEQUENCE FROM N.A.
RC   STRAIN=Sprague-Dawley;
RX   MEDLINE=22050031; PubMed=12054613; DOI=10.1016/S0006-291X(02)00239-5;
RA   Masuda Y., Takatsu Y., Terao Y., Kumano S., Ishibashi Y., Suenaga M.,
RA   Abe M., Fukusumi S., Watanabe T., Shintani Y., Yamada T., Hinuma S.,
RA   Inatomi N., Ohtaki T., Onda H., Fujino M.;
RT   "Isolation and identification of EG-VEGF/prokineticins as cognate
RT   ligands for two orphan G-protein-coupled receptors.";
RL   Biochem. Biophys. Res. Commun. 293:396-402(2002).
RN   [2]
RP   EFFECT ON CIRCADIAN LOCOMOTOR ACTIVITY.
RX   MEDLINE=22022134; PubMed=12024206; DOI=10.1038/417405a;
RA   Cheng M.Y., Bullock C.M., Li C., Lee A.G., Bermak J.C., Belluzzi J.,
RA   Weaver D.R., Leslie F.M., Zhou Q.-Y.;
RT   "Prokineticin 2 transmits the behavioural circadian rhythm of the
RT   suprachiasmatic nucleus.";
RL   Nature 417:405-410(2002).
CC   -!- FUNCTION: May function as an output molecule from the
CC       suprachiasmatic nucleus (SCN) that transmits behavioral circadian
CC       rhythm. May also function locally within the SCN to synchronize
CC       output. Potently contracts gastrointestinal (GI) smooth muscle (By
CC       similarity).
CC   -!- SUBCELLULAR LOCATION: Secreted (By similarity).
CC   -!- TISSUE SPECIFICITY: Expressed at high levels in testis and at
CC       lower levels in brain, lung, ovary, spleen, thymus and uterus.
CC   -!- INDUCTION: Activated by CLOCK and BMAL1 heterodimers and light;
CC       inhibited by period genes (PER1, PER2 and PER3) and cryptochrome
CC       genes (CRY1 and CRY2) (Probable).
CC   -!- SIMILARITY: Belongs to the prokinecitin family.
CC   ---------------------------------------------------------------------
CC   This SWISS-PROT entry is copyright. It is produced through a collaboration
CC   between the Swiss Institute of Bioinformatics and the EMBL outstation -
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CC   ---------------------------------------------------------------------
DR   EMBL; AY089984; AAM09105.1; -.
DR   HSSP; P25687; 1IMT.
```

```
DR   RGD; 620280; Bv8.
DR   InterPro; IPR009523; Prokineticin.
DR   Pfam; PF06607; Prokineticin; 1.
KW   Biological rhythms; Neuropeptide; Signal.
FT   SIGNAL        1     26       Potential.
FT   CHAIN        27    107       Prokineticin 2.
FT   DISULFID     33     45       By similarity.
FT   DISULFID     39     57       By similarity.
FT   DISULFID     44     85       By similarity.
FT   DISULFID     67     93       By similarity.
FT   DISULFID     87    103       By similarity.
SQ   SEQUENCE   107 AA;  11594 MW;  BDFF316CDCB5FED0 CRC64;

  Query Match             96.5%;  Score 445;  DB 1;  Length 107;
  Best Local Similarity   95.1%;  Pred. No. 9.2e-42;
  Matches   77;  Conservative    4;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 AVITGACDKDSQCGGGMCCAVSIWVKSIRICTPMGKLGDSCHPLTRKVPFFGRRMHHTCP 60
              ||||||||||||||||||||||||||||||||::|||||||||||||:|||||||||
Db         27 AVITGACDKDSQCGGGMCCAVSIWVKSIRICTPMGQVGDSCHPLTRKVPFWGRRMHHTCP 86

Qy         61 CLPGLACLRTSFNRFICLAQK 81
              |||||||||||||||||:|
Db         87 CLPGLACLRTSFNRFICLARK 107


RESULT 2
PRK2_HUMAN
ID   PRK2_HUMAN     STANDARD;      PRT;   129 AA.
AC   Q9HC23;
DT   16-OCT-2001 (Rel. 40, Created)
DT   16-OCT-2001 (Rel. 40, Last sequence update)
DT   25-JAN-2005 (Rel. 46, Last annotation update)
DE   Prokineticin 2 precursor (PK2) (Protein Bv8 homolog).
GN   Name=PROK2; Synonyms=BV8;
OS   Homo sapiens (Human).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX   NCBI_TaxID=9606;
RN   [1]
RP   SEQUENCE OF 5-129 FROM N.A. (ISOFORM 1).
RC   TISSUE=Testis;
RX   MEDLINE=20047850; PubMed=10580115; DOI=10.1016/S0014-5793(99)01473-8;
RA   Wechselberger C., Puglisi R., Lepperdinger G., Boitani C., Kreil G.;
RT   "The mammalian homologue of Bv8 from frog skin is mainly expressed in
RT   spermatocytes.";
RL   FEBS Lett. 462:177-181(1999).
RN   [2]
RP   SEQUENCE FROM N.A. (ISOFORM 2).
RX   MEDLINE=21160229; PubMed=11259612;
RA   Li M., Bullock C.M., Knauer D.J., Ehlert F.J., Zhou Q.-Y.;
RT   "Identification of two prokineticin cDNAs: recombinant proteins
RT   potently contract gastrointestinal smooth muscle.";
RL   Mol. Pharmacol. 59:692-698(2001).
RN   [3]
RP   SEQUENCE OF 28-42.
RX   PubMed=15340161; DOI=10.1110/ps.04682504;
RA   Zhang Z., Henzel W.J.;
RT   "Signal peptide prediction based on analysis of experimentally
RT   verified cleavage sites.";
RL   Protein Sci. 13:2819-2824(2004).
CC   -!- FUNCTION: May function as an output molecule from the
CC       suprachiasmatic nucleus (SCN) that transmits behavioral circadian
CC       rhythm. May also function locally within the SCN to synchronize
CC       output. Potently contracts gastrointestinal (GI) smooth muscle.
CC   -!- SUBCELLULAR LOCATION: Secreted.
CC   -!- ALTERNATIVE PRODUCTS:
CC       Event=Alternative splicing; Named isoforms=2;
CC       Name=1;
CC         IsoId=Q9HC23-1; Sequence=Displayed;
CC       Name=2;
CC         IsoId=Q9HC23-2; Sequence=VSP_005219;
CC   -!- TISSUE SPECIFICITY: Expressed in the testis and, at low levels, in
CC       the small intestine.
CC   -!- INDUCTION: Activated by CLOCK and BMAL1 heterodimers and light;
CC       inhibited by period genes (PER1, PER2 and PER3) and cryptochrome
CC       genes (CRY1 and CRY2) (Probable).
CC   -!- SIMILARITY: Belongs to the prokinecitin family.
CC   ---------------------------------------------------------------------
CC   This SWISS-PROT entry is copyright. It is produced through a collaboration
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CC   or send an email to license@isb-sib.ch).
CC   ---------------------------------------------------------------------
DR   EMBL; AF182069; AAG16893.2; -.
DR   EMBL; AF333025; AAK49919.1; -.
DR   HSSP; P25687; 1IMT.
DR   Genew; HGNC:18455; PROK2.
DR   MIM; 607002; -.
DR   GO; GO:0005576; C:extracellular; TAS.
DR   GO; GO:0001664; F:G-protein-coupled receptor binding; TAS.
DR   GO; GO:0000187; P:activation of MAPK; TAS.
DR   GO; GO:0001525; P:angiogenesis; IDA.
DR   GO; GO:0006916; P:anti-apoptosis; IDA.
DR   GO; GO:0008283; P:cell proliferation; IDA.
DR   GO; GO:0006935; P:chemotaxis; IDA.
DR   GO; GO:0007204; P:cytosolic calcium ion concentration elevation; TAS.
DR   GO; GO:0007186; P:G-protein coupled receptor protein signalin. . .; NAS.
DR   GO; GO:0006954; P:inflammatory response; NAS.
DR   GO; GO:0019233; P:perception of pain; TAS.
DR   GO; GO:0045987; P:positive regulation of smooth muscle contra. . .; IDA.
DR   GO; GO:0007283; P:spermatogenesis; IMP.
DR   InterPro; IPR009523; Prokineticin.
DR   Pfam; PF06607; Prokineticin; 1.
KW   Alternative splicing; Biological rhythms; Direct protein sequencing;
KW   Neuropeptide; Signal.
FT   SIGNAL        1     27
FT   CHAIN        28    129       Prokineticin 2.
FT   DISULFID     34     46       By similarity.
FT   DISULFID     40     58       By similarity.
FT   DISULFID     45    107       By similarity.
FT   DISULFID     68    115       By similarity.
FT   DISULFID    109    125       By similarity.
FT   VARSPLIC     75     95       Missing (in isoform 2).
FT                                /FTId=VSP_005219.
SQ   SEQUENCE   129 AA;  14314 MW;  0487679E8700DA55 CRC64;

  Query Match             95.6%;  Score 440.5;  DB 1;  Length 129;
  Best Local Similarity   79.4%;  Pred. No. 3.5e-41;
  Matches   81;  Conservative    0;  Mismatches    0;  Indels   21;  Gaps    1;

Qy          1 AVITGACDKDSQCGGGMCCAVSIWVKSIRICTPMGKLGDSCHPLTRK------------- 47
              ||||||||||||||||||||||||||||||||||||||||||||||||
Db         28 AVITGACDKDSQCGGGMCCAVSIWVKSIRICTPMGKLGDSCHPLTRKNNFGNGRQERRKR 87

Qy         48 --------VPFFGRRMHHTCPCLPGLACLRTSFNRFICLAQK 81
                      ||||||||||||||||||||||||||||||||||
Db         88 KRSKRKKEVPFFGRRMHHTCPCLPGLACLRTSFNRFICLAQK 129


RESULT 3
Q863H4
ID   Q863H4      PRELIMINARY;      PRT;   108 AA.
AC   Q863H4;
DT   01-JUN-2003 (TrEMBLrel. 24, Created)
DT   01-JUN-2003 (TrEMBLrel. 24, Last sequence update)
DT   01-MAR-2004 (TrEMBLrel. 26, Last annotation update)
DE   Bv8/prokineticin 2-like protein splice variant.
OS   Bos taurus (Bovine).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovidae;
OC   Bovinae; Bos.
OX   NCBI_TaxID=9913;
```

```
RN   [1]
RP   SEQUENCE FROM N.A.
RC   TISSUE=Testis;
RX   MEDLINE=22612805; PubMed=12728244; DOI=10.1038/sj.embor.embor830;
RA   Kaser A., Winklmayr M., Lepperdinger G., Kreil G.;
RT   "The AVIT protein family.";
RL   EMBO Rep. 4:469-473(2003).
DR   EMBL; AY192558; AAP31907.1; -.
DR   HSSP; P25687; 1IMT.
DR   InterPro; IPR009523; Prokineticin.
DR   Pfam; PF06607; Prokineticin; 1.
SQ   SEQUENCE   108 AA;  11672 MW;  C00410399A9B215E CRC64;

  Query Match             92.4%;  Score 426;  DB 2;  Length 108;
  Best Local Similarity   88.9%;  Pred. No. 1.2e-39;
  Matches   72;  Conservative    5;  Mismatches    4;  Indels    0;  Gaps    0;

Qy          1 AVITGACDKDSQCGGGMCCAVSIWVKSIRICTPMGKLGDSCHPLTRKVPFFGRRMHHTCP 60
              ||||||||:| |||||||||||:|||||||||||||:||||||:|||||| |||||||||
Db         28 AVITGACDRDPQCGGGMCCAVSLWVKSIRICTPMGKVGDSCHPMTRKVPFLGRRMHHTCP 87

Qy         61 CLPGLACLRTSFNRFICLAQK 81
              ||||||| ||||||: |||||
Db         88 CLPGLACSRTSFNRYTCLAQK 108


RESULT 4
PRK2_MOUSE
ID   PRK2_MOUSE     STANDARD;      PRT;   128 AA.
AC   Q9QXU7; Q9QXU5; Q9QXU6;
DT   16-OCT-2001 (Rel. 40, Created)
DT   16-OCT-2001 (Rel. 40, Last sequence update)
DT   05-JUL-2004 (Rel. 44, Last annotation update)
DE   Prokineticin 2 precursor (PK2) (Protein Bv8 homolog).
GN   Name=Prok2; Synonyms=Bv8;
OS   Mus musculus (Mouse).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX   NCBI_TaxID=10090;
RN   [1]
RP   SEQUENCE FROM N.A. (ISOFORMS 1 AND 2).
RC   STRAIN=129/Sv;
RX   MEDLINE=20047850; PubMed=10580115; DOI=10.1016/S0014-5793(99)01473-8;
RA   Wechselberger C., Puglisi R., Lepperdinger G., Boitani C., Kreil G.;
RT   "The mammalian homologue of Bv8 from frog skin is mainly expressed in
RT   spermatocytes.";
RL   FEBS Lett. 462:177-181(1999).
RN   [2]
RP   SEQUENCE FROM N.A. (ISOFORMS 1; 2 AND 3).
RC   STRAIN=129/SvJ;
RX   PubMed=11054548; DOI=10.1016/S0378-1119(00)00355-3;
RA   Jilek A., Engel E., Beier D., Lepperdinger G.;
RT   "Murine Bv8 gene maps near a synteny breakpoint of mouse chromosome 6
RT   and human 3p21.";
RL   Gene 256:189-195(2000).
RN   [3]
RP   SEQUENCE FROM N.A. (ISOFORM 2), AND FUNCTION.
RC   STRAIN=C57BL/6;
RX   MEDLINE=22022134; PubMed=12024206; DOI=10.1038/417405a;
RA   Cheng M.Y., Bullock C.M., Li C., Lee A.G., Bermak J.C., Belluzzi J.,
RA   Weaver D.R., Leslie F.M., Zhou Q.-Y.;
RT   "Prokineticin 2 transmits the behavioural circadian rhythm of the
RT   suprachiasmatic nucleus.";
RL   Nature 417:405-410(2002).
RN   [4]
RP   SEQUENCE FROM N.A. (ISOFORM 1).
RC   STRAIN=C57BL/6J; TISSUE=Testis;
RX   MEDLINE=22354683; PubMed=12466851; DOI=10.1038/nature01266;
RA   Okazaki Y., Furuno M., Kasukawa T., Adachi J., Bono H., Kondo S.,
RA   Nikaido I., Osato N., Saito R., Suzuki H., Yamanaka I., Kiyosawa H.,
RA   Yagi K., Tomaru Y., Hasegawa Y., Nogami A., Schonbach C., Gojobori T.,
RA   Baldarelli R., Hill D.P., Bult C., Hume D.A., Quackenbush J.,
RA   Schriml L.M., Kanapin A., Matsuda H., Batalov S., Beisel K.W.,
RA   Blake J.A., Bradt D., Brusic V., Chothia C., Corbani L.E., Cousins S.,
RA   Dalla E., Dragani T.A., Fletcher C.F., Forrest A., Frazer K.S.,
RA   Gaasterland T., Gariboldi M., Gissi C., Godzik A., Gough J.,
RA   Grimmond S., Gustincich S., Hirokawa N., Jackson I.J., Jarvis E.D.,
RA   Kanai A., Kawaji H., Kawasawa Y., Kedzierski R.M., King B.L.,
RA   Konagaya A., Kurochkin I.V., Lee Y., Lenhard B., Lyons P.A.,
RA   Maglott D.R., Maltais L., Marchionni L., McKenzie L., Miki H.,
RA   Nagashima T., Numata K., Okido T., Pavan W.J., Pertea G., Pesole G.,
RA   Petrovsky N., Pillai R., Pontius J.U., Qi D., Ramachandran S.,
RA   Ravasi T., Reed J.C., Reed D.J., Reid J., Ring B.Z., Ringwald M.,
RA   Sandelin A., Schneider C., Semple C.A., Setou M., Shimada K.,
RA   Sultana R., Takenaka Y., Taylor M.S., Teasdale R.D., Tomita M.,
RA   Verardo R., Wagner L., Wahlestedt C., Wang Y., Watanabe Y., Wells C.,
RA   Wilming L.G., Wynshaw-Boris A., Yanagisawa M., Yang I., Yang L.,
RA   Yuan Z., Zavolan M., Zhu Y., Zimmer A., Carninci P., Hayatsu N.,
RA   Hirozane-Kishikawa T., Konno H., Nakamura M., Sakazume N., Sato K.,
RA   Shiraki T., Waki K., Kawai J., Aizawa K., Arakawa T., Fukuda S.,
RA   Hara A., Hashizume W., Imotani K., Ishii Y., Itoh M., Kagawa I.,
RA   Miyazaki A., Sakai K., Sasaki D., Shibata K., Shinagawa A.,
RA   Yasunishi A., Yoshino M., Waterston R., Lander E.S., Rogers J.,
RA   Birney E., Hayashizaki Y.;
RT   "Analysis of the mouse transcriptome based on functional annotation of
RT   60,770 full-length cDNAs.";
RL   Nature 420:563-573(2002).
CC   -!- FUNCTION: May function as an output molecule from the
CC       suprachiasmatic nucleus (SCN) that transmits behavioral circadian
CC       rhythm. May also function locally within the SCN to synchronize
CC       output. Potently contracts gastrointestinal (GI) smooth muscle (By
CC       similarity).
CC   -!- SUBCELLULAR LOCATION: Secreted.
CC   -!- ALTERNATIVE PRODUCTS:
CC       Event=Alternative splicing; Named isoforms=3;
CC       Name=1; Synonyms=Bv8-a;
CC         IsoId=Q9QXU7-1; Sequence=Displayed;
CC       Name=2; Synonyms=Bv8-b;
CC         IsoId=Q9QXU7-2; Sequence=VSP_005220;
CC       Name=3;
CC         IsoId=Q9QXU7-3; Sequence=VSP_005221;
CC   -!- TISSUE SPECIFICITY: Expressed in the SCN and among a few other
CC       discrete brain areas, including the islands of Calleja, media l
CC       preoptic area of the hypothalamus and the shell of the nucleus
CC       accumbens. Highly expressed in testis. In the SCN, expression
CC       subjected to high amplitude of circadian oscillation.
CC   -!- DEVELOPMENTAL STAGE: Expressed in mid-late pachytene spermatocytes
CC       at the stages VII, VIII and IX of the semiferous epithelial cycle.
CC   -!- INDUCTION: Activated by CLOCK and BMAL1 heterodimers and light;
CC       inhibited by period genes (PER1, PER2 and PER3) and cryptochrome
CC       genes (CRY1 and CRY2).
CC   -!- SIMILARITY: Belongs to the prokinecitin family.
CC   ---------------------------------------------------------------------
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CC   or send an email to license@isb-sib.ch).
CC   ---------------------------------------------------------------------
DR   EMBL; AF182064; AAF15259.1; -.
DR   EMBL; AF182065; AAF15260.1; -.
DR   EMBL; AF182066; AAF15261.1; -.
DR   EMBL; AF182068; AAG09439.1; -.
DR   EMBL; AF182067; AAG09439.1; JOINED.
DR   EMBL; AF487280; AAM49572.1; -.
DR   EMBL; AK015462; BAB29857.1; -.
DR   HSSP; P25687; 1IMT.
DR   MGD; MGI:1354178; Prok2.
DR   GO; GO:0005576; C:extracellular; ISS.
DR   GO; GO:0001664; F:G-protein-coupled receptor binding; ISS.
DR   GO; GO:0000187; P:activation of MAPK; ISS.
DR   GO; GO:0001525; P:angiogenesis; ISS.
DR   GO; GO:0006916; P:anti-apoptosis; ISS.
DR   GO; GO:0008283; P:cell proliferation; ISS.
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DR   GO; GO:0006935; P:chemotaxis; ISS.
DR   GO; GO:0007623; P:circadian rhythm; IDA.
DR   GO; GO:0007204; P:cytosolic calcium ion concentration elevation; ISS.
DR   GO; GO:0007186; P:G-protein coupled receptor protein signalin. . .; ISS.
DR   GO; GO:0006954; P:inflammatory response; ISS.
DR   GO; GO:0019233; P:perception of pain; ISS.
DR   GO; GO:0045987; P:positive regulation of smooth muscle contra. . .; ISS.
DR   GO; GO:0007283; P:spermatogenesis; ISS.
DR   InterPro; IPR009523; Prokineticin.
DR   Pfam; PF06607; Prokineticin; 1.
KW   Alternative splicing; Biological rhythms; Neuropeptide; Signal.
FT   SIGNAL        1     26       Potential.
FT   CHAIN        27    128       Prokineticin 2.
FT   DISULFID     33     45       By similarity.
FT   DISULFID     39     57       By similarity.
FT   DISULFID     44    106       By similarity.
FT   DISULFID     67    114       By similarity.
FT   DISULFID    108    124       By similarity.
FT   VARSPLIC     74     94       Missing (in isoform 2).
FT                               /FTId=VSP_005220.
FT   VARSPLIC     74    128       SHVANGRQERRRAKRRKRKKEVPFWGRRMHHTCPCLPGLAC
FT                               LRTSFNRFICLARK -> VSVCTGILGVPSH (in
FT                               isoform 3).
FT                               /FTId=VSP_005221.
SQ   SEQUENCE   128 AA;  14185 MW;  5F08BA177FDDB58C CRC64;

  Query Match             92.1%;  Score 424.5;  DB 1;  Length 128;
  Best Local Similarity   75.5%;  Pred. No. 2.1e-39;
  Matches   77;  Conservative    4;  Mismatches    0;  Indels   21;  Gaps    1;

Qy          1 AVITGACDKDSQCGGGMCCAVSIWVKSIRICTPMGKLGDSCHPLTRK------------ 47
              |||||||||||||||||||||||||||||||||::||||||||||
Db         27 AVITGACDKDSQCGGGMCCAVSIWVKSIRICTPMGQVGDSCHPLTRKSHVANGRQERRRA 86

Qy         48 --------VPFFGRRMHHTCPCLPGLACLRTSFNRFICLAQK 81
                    |||:|||||||||||||||||||||||||||:|
Db         87 KRRKRKKEVPFWGRRMHHTCPCLPGLACLRTSFNRFICLARK 128


RESULT 5
Q6V8J7
ID   Q6V8J7      PRELIMINARY;      PRT;   128 AA.
AC   Q6V8J7;
DT   05-JUL-2004 (TrEMBLrel. 27, Created)
DT   05-JUL-2004 (TrEMBLrel. 27, Last sequence update)
DT   05-JUL-2004 (TrEMBLrel. 27, Last annotation update)
DE   Prokineticin 2 beta.
GN   Name=PK2beta;
OS   Rattus norvegicus (Rat).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
OX   NCBI_TaxID=10116;
RN   [1]
RP   SEQUENCE FROM N.A.
RC   STRAIN=Sprague-Dawley;
RA   Chen J., Sutton S., Kuei C., Wilson S.J., Lovenberg T.W., Liu C.;
RL   Submitted (JUL-2003) to the EMBL/GenBank/DDBJ databases.
DR   EMBL; AY348322; AAR06924.1; -.
DR   InterPro; IPR009523; Prokineticin.
DR   Pfam; PF06607; Prokineticin; 1.
SQ   SEQUENCE   128 AA;  14223 MW;  67050CC1A7D59466 CRC64;

  Query Match             92.1%;  Score 424.5;  DB 2;  Length 128;
  Best Local Similarity   75.5%;  Pred. No. 2.1e-39;
  Matches   77;  Conservative    4;  Mismatches    0;  Indels   21;  Gaps    1;

Qy          1 AVITGACDKDSQCGGGMCCAVSIWVKSIRICTPMGKLGDSCHPLTRK------------ 47
              |||||||||||||||||||||||||||||||||::||||||||||
Db         27 AVITGACDKDSQCGGGMCCAVSIWVKSIRICTPMGQVGDSCHPLTRKSHVANGRQERRRA 86

Qy         48 --------VPFFGRRMHHTCPCLPGLACLRTSFNRFICLAQK 81
                    |||:|||||||||||||||||||||||||||:|
Db         87 KRRKRKKEVPFWGRRMHHTCPCLPGLACLRTSFNRFICLARK 128


RESULT 6
Q863H5
ID   Q863H5      PRELIMINARY;      PRT;   128 AA.
AC   Q863H5;
DT   01-JUN-2003 (TrEMBLrel. 24, Created)
DT   01-JUN-2003 (TrEMBLrel. 24, Last sequence update)
DT   01-MAR-2004 (TrEMBLrel. 26, Last annotation update)
DE   Bv8/prokineticin 2-like protein.
OS   Bos taurus (Bovine).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovidae;
OC   Bovinae; Bos.
OX   NCBI_TaxID=9913;
RN   [1]
RP   SEQUENCE FROM N.A.
RC   TISSUE=Testis;
RX   MEDLINE=22612805; PubMed=12728244; DOI=10.1038/sj.embor.embor830;
RA   Kaser A., Winklmayr M., Lepperdinger G., Kreil G.;
RT   "The AVIT protein family.";
RL   EMBO Rep. 4:469-473(2003).
DR   EMBL; AY192557; AAP31906.1; -.
DR   HSSP; P25687; 1IMT.
DR   GO; GO:0005576; C:extracellular; ISS.
DR   GO; GO:0001664; F:G-protein-coupled receptor binding; ISS.
DR   GO; GO:0000187; P:activation of MAPK; ISS.
DR   GO; GO:0001525; P:angiogenesis; ISS.
DR   GO; GO:0006916; P:anti-apoptosis; ISS.
DR   GO; GO:0008283; P:cell proliferation; ISS.
DR   GO; GO:0006935; P:chemotaxis; ISS.
DR   GO; GO:0007204; P:cytosolic calcium ion concentration elevation; ISS.
DR   GO; GO:0007186; P:G-protein coupled receptor protein signalin. . .; ISS.
DR   GO; GO:0006954; P:inflammatory response; ISS.
DR   GO; GO:0019233; P:perception of pain; ISS.
DR   GO; GO:0045987; P:positive regulation of smooth muscle contra. . .; ISS.
DR   GO; GO:0007283; P:spermatogenesis; ISS.
DR   InterPro; IPR009523; Prokineticin.
DR   Pfam; PF06607; Prokineticin; 1.
SQ   SEQUENCE   128 AA;  14290 MW;  C22CDBDBE40483EC CRC64;

  Query Match             88.1%;  Score 406;  DB 2;  Length 128;
  Best Local Similarity   71.3%;  Pred. No. 2.3e-37;
  Matches   72;  Conservative    5;  Mismatches    4;  Indels   20;  Gaps    1;

Qy          1 AVITGACDKDSQCGGGMCCAVSIWVKSIRICTPMGKLGDSCHPLTR-------------- 46
              ||||||||:| |||||||||||:|||||||||||||:||||||:||
Db         28 AVITGACDRDPQCGGGMCCAVSLWVKSIRICTPMGKVGDSCHPMTRKNHFGNGRQERRKR 87

Qy         47 ------KVPFFGRRMHHTCPCLPGLACLRTSFNRFICLAQK 81
                    |||| |||||||||||||| ||||||: |||||
Db         88 KRRRKKKVPFLGRRMHHTCPCLPGLACSRTSFNRYTCLAQK 128


RESULT 7
VPRA_DENPO
ID   VPRA_DENPO     STANDARD;      PRT;    81 AA.
AC   P25687;
DT   01-MAY-1992 (Rel. 22, Created)
DT   30-MAY-2000 (Rel. 39, Last sequence update)
DT   25-OCT-2004 (Rel. 45, Last annotation update)
DE   Intestinal toxin 1 (MIT 1) (MIT1) (Venom protein A).
OS   Dendroaspis polylepis polylepis (Black mamba).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Lepidosauria; Squamata; Scleroglossa; Serpentes; Colubroidea;
OC   Elapidae; Elapinae; Dendroaspis.
OX   NCBI_TaxID=8620;
RN   [1]
RP   SEQUENCE.
RC   TISSUE=Venom;
RX   MEDLINE=81115818; PubMed=7461607;
RA   Joubert F.J., Strydom D.J.;
RT   "Snake venom. The amino acid sequence of protein A from Dendroaspis
```

```
RT   polylepis polylepis (black mamba) venom.";
RL   Hoppe-Seyler's Z. Physiol. Chem. 361:1787-1794(1980).
RN   [2]
RP   CHARACTERIZATION.
RX   MEDLINE=20036442; PubMed=10567694; DOI=10.1016/S0014-5793(99)01459-3;
RA   Schweitz H., Pascaud P., Diochot S., Moinier D., Lazdunski M.;
RT   "MIT1, a black mamba toxin with a new and highly potent activity on
RT   intestinal contraction.";
RL   FEBS Lett. 461:183-188(1998).
RN   [3]
RP   STRUCTURE BY NMR.
RC   TISSUE=Venom;
RX   MEDLINE=98437381; PubMed=9761684; DOI=10.1006/jmbi.1998.2057;
RA   Boisbouvier J., Albrand J.-P., Blackledge M., Jaquinod M.,
RA   Schweitz H., Lazdunski M., Marion D.;
RT   "A structural homologue of colipase in black mamba venom revealed by
RT   NMR floating disulphide bridge analysis.";
RL   J. Mol. Biol. 283:205-219(1998).
CC   -!- FUNCTION: Potently contract gastrointestinal (GI) smooth muscle.
CC   -!- SUBCELLULAR LOCATION: Secreted.
CC   -!- SIMILARITY: Belongs to the prokinecitin family.
DR   PDB; 1IMT; NMR; @=1-81.
DR   InterPro; IPR009523; Prokineticin.
DR   Pfam; PF06607; Prokineticin; 1.
KW   3D-structure; Direct protein sequencing; Toxin.
FT   DISULFID      7     19
FT   DISULFID     13     31
FT   DISULFID     18     60
FT   DISULFID     41     68
FT   DISULFID     62     78
FT   VARIANT      73     73       P -> Q (in protein A').
FT   CONFLICT     18     18       C -> S (in Ref. 1).
FT   CONFLICT     22     22       S -> C (in Ref. 1).
SQ   SEQUENCE   81 AA;  8645 MW;  6C01368841572044 CRC64;

  Query Match             67.8%;  Score 312.5;  DB 1;  Length 81;
  Best Local Similarity   61.7%;  Pred. No. 3.8e-27;
  Matches   50;  Conservative   16;  Mismatches   14;  Indels    1;  Gaps    1;

Qy          1 AVITGACDKDSQCGGGMCCAVSIWVKSIRICTPMGKLGDSCHPLTRKVPFFG-RRMHHTC 59
              |||||||::| ||| | |||||:|:||:|:|||:|  |: ||| : |:|| | |:|||||
Db          1 AVITGACERDLQCGKGTCCAVSLWIKSVRVCTPVGTSGEDCHPASHKIPFSGQRKMHHTC 60

Qy         60 PCLPGLACLRTSFNRFICLAQ 80
              || | |||::||  :| ||::
Db         61 PCAPNLACVQTSPKKFKCLSK 81


RESULT 8
PRK1_HUMAN
ID   PRK1_HUMAN     STANDARD;      PRT;   105 AA.
AC   P58294;
DT   16-OCT-2001 (Rel. 40, Created)
DT   16-OCT-2001 (Rel. 40, Last sequence update)
DT   25-JAN-2005 (Rel. 46, Last annotation update)
DE   Prokineticin 1 precursor (Endocrine-gland-derived vascular endothelial
DE   growth factor) (EG-VEGF) (Mambakine) (UNQ600/PRO1186).
GN   Name=PROK1;
OS   Homo sapiens (Human).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX   NCBI_TaxID=9606;
RN   [1]
RP   SEQUENCE FROM N.A.
RX   MEDLINE=21160229; PubMed=11259612;
RA   Li M., Bullock C.M., Knauer D.J., Ehlert F.J., Zhou Q.Y.;
RT   "Identification of two prokineticin cDNAs: recombinant proteins
RT   potently contract gastrointestinal smooth muscle.";
RL   Mol. Pharmacol. 59:692-698(2001).
RN   [2]
RP   SEQUENCE FROM N.A.
RX   MEDLINE=21419730; PubMed=11528470; DOI=10.1038/35091000;
RA   LeCouter J., Kowalski J., Foster J., Hass P., Zhang Z.,
RA   Dillard-Telm L., Frantz G., Rangell L., DeGuzman L., Keller G.-A.,
RA   Peale F., Gurney A., Hillan K.J., Ferrara N.;
RT   "Identification of an angiogenic mitogen selective for endocrine gland
RT   endothelium.";
RL   Nature 412:877-884(2001).
RN   [3]
RP   SEQUENCE FROM N.A.
RA   Fraser C.;
RT   "Mambakine, a snake venom related endocrine hormone that controls
RT   macrophages.";
RL   Submitted (APR-2001) to the EMBL/GenBank/DDBJ databases.
RN   [4]
RP   SEQUENCE FROM N.A.
RX   MEDLINE=22887296; PubMed=12975309; DOI=10.1101/gr.1293003;
RA   Clark H.F., Gurney A.L., Abaya E., Baker K., Baldwin D., Brush J.,
RA   Chen J., Chow B., Chui C., Crowley C., Currell B., Deuel B., Dowd P.,
RA   Eaton D., Foster J., Grimaldi C., Gu Q., Hass P.E., Heldens S.,
RA   Huang A., Kim H.S., Klimowski L., Jin Y., Johnson S., Lee J.,
RA   Lewis L., Liao D., Mark M., Robbie E., Sanchez C., Schoenfeld J.,
RA   Seshagiri S., Simmons L., Singh J., Smith V., Stinson J., Vagts A.,
RA   Vandlen R., Watanabe C., Wieand D., Woods K., Xie M.-H., Yansura D.,
RA   Yi S., Yu G., Yuan J., Zhang M., Zhang Z., Goddard A., Wood W.I.,
RA   Godowski P., Gray A.;
RT   "The secreted protein discovery initiative (SPDI), a large-scale
RT   effort to identify novel human secreted and transmembrane proteins: a
RT   bioinformatics assessment.";
RL   Genome Res. 13:2265-2270(2003).
RN   [5]
RP   SEQUENCE OF 20-34.
RX   PubMed=15340161; DOI=10.1110/ps.04682504;
RA   Zhang Z., Henzel W.J.;
RT   "Signal peptide prediction based on analysis of experimentally
RT   verified cleavage sites.";
RL   Protein Sci. 13:2819-2824(2004).
CC   -!- FUNCTION: Potently contract gastrointestinal (GI) smooth muscle.
CC       Induces proliferation, migration and fenestration (the formation
CC       of membrane discontinuities) in capillary endothelial cells
CC       derived from endocrine glands. Has little or no effect on a
CC       variety of other endothelial and non-endothelial cell types.
CC   -!- SUBCELLULAR LOCATION: Secreted.
CC   -!- TISSUE SPECIFICITY: Expressed in the steroidogenic glands, ovary,
CC       testis, adrenal and placenta.
CC   -!- SIMILARITY: Belongs to the prokinecitin family.
CC   ----------------------------------------------------------------------
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CC   or send an email to license@isb-sib.ch).
CC   ----------------------------------------------------------------------
DR   EMBL; AF333024; AAK49918.1; -.
DR   EMBL; AY029225; AAK33111.1; -.
DR   EMBL; AY358683; AAQ89046.1; -.
DR   HSSP; P25687; 1IMT.
DR   Genew; HGNC:18454; PROK1.
DR   H-InvDB; HIX0000868; -.
DR   MIM; 606233; -.
DR   InterPro; IPR009523; Prokineticin.
DR   Pfam; PF06607; Prokineticin; 1.
KW   Direct protein sequencing; Growth factor; Mitogen; Signal.
FT   SIGNAL        1     19
FT   CHAIN        20    105       Prokineticin 1.
FT   DISULFID     26     38       By similarity.
FT   DISULFID     32     50       By similarity.
FT   DISULFID     37     78       By similarity.
FT   DISULFID     60     86       By similarity.
FT   DISULFID     80     96       By similarity.
SQ   SEQUENCE   105 AA;  11715 MW;  C7E3FDE30EFB416A CRC64;

  Query Match             63.1%;  Score 291;  DB 1;  Length 105;
  Best Local Similarity   58.4%;  Pred. No. 1.2e-24;
```

```
  Matches   45;  Conservative   14;  Mismatches   18;  Indels    0;  Gaps    0;

Qy          1 AVITGACDKDSQCGGGMCCAVSIWVKSIRICTPMGKLGDSCHPLTRKVPFFGRRMHHTCP 60
              |||||||::| ||| | |||:|:|:: :|:|||:|: |: ||| : ||||| :| |||||
Db         20 AVITGACERDVQCGAGTCCAISLWLRGLRMCTPLGREGEECHPGSHKVPFFRKRKHHTCP 79

Qy         61 CLPGLACLRTSFNRFIC 77
              ||| | | |    |: |
Db         80 CLPNLLCSRFPDGRYRC 96


RESULT 9
Q8TC69
ID   Q8TC69      PRELIMINARY;      PRT;   105 AA.
AC   Q8TC69;
DT   01-JUN-2002 (TrEMBLrel. 21, Created)
DT   01-JUN-2002 (TrEMBLrel. 21, Last sequence update)
DT   01-MAR-2004 (TrEMBLrel. 26, Last annotation update)
DE   Prokineticin 1.
GN   Name=PROK1;
OS   Homo sapiens (Human).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX   NCBI_TaxID=9606;
RN   [1]
RP   SEQUENCE FROM N.A.
RC   TISSUE=Testis;
RX   MEDLINE=22388257; PubMed=12477932; DOI=10.1073/pnas.242603899;
RA   Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,
RA   Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,
RA   Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
RA   Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
RA   Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
RA   Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,
RA   Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,
RA   Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,
RA   Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,
RA   Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
RA   Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
RA   Fahey J., Helton E., Ketteman M., Madan A., Rodrigues S., Sanchez A.,
RA   Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,
RA   Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,
RA   Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M., Butterfield Y.S.,
RA   Krzywinski M.I., Skalska U., Smailus D.E., Schnerch A., Schein J.E.,
RA   Jones S.J., Marra M.A.;
RT   "Generation and initial analysis of more than 15,000 full-length human
RT   and mouse cDNA sequences.";
RL   Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).
RN   [2]
RP   SEQUENCE FROM N.A.
RC   TISSUE=Testis;
RA   Strausberg R.;
RL   Submitted (MAR-2002) to the EMBL/GenBank/DDBJ databases.
DR   EMBL; BC025399; AAH25399.1; -.
DR   HSSP; P25687; 1IMT.
DR   InterPro; IPR009523; Prokineticin.
DR   Pfam; PF06607; Prokineticin; 1.
SQ   SEQUENCE   105 AA;  11729 MW;  E570FDE30EFB52D2 CRC64;

  Query Match             62.9%;  Score 290;  DB 2;  Length 105;
  Best Local Similarity   57.1%;  Pred. No. 1.5e-24;
  Matches   44;  Conservative   15;  Mismatches   18;  Indels    0;  Gaps    0;

Qy          1 AVITGACDKDSQCGGGMCCAVSIWVKSIRICTPMGKLGDSCHPLTRKVPFFGRRMHHTCP 60
              |||||||::| ||| | |||:|:|:: :|:|||:|: |: ||| : |:||| :| |||||
Db         20 AVITGACERDVQCGAGTCCAISLWLRGLRMCTPLGREGEECHPGSHKIPFFRKRKHHTCP 79

Qy         61 CLPGLACLRTSFNRFIC 77
              ||| | | |    |: |
Db         80 CLPNLLCSRFPDGRYRC 96


RESULT 10
PRK1_RAT
ID   PRK1_RAT       STANDARD;      PRT;   105 AA.
AC   Q8R414;
DT   10-OCT-2003 (Rel. 42, Created)
DT   10-OCT-2003 (Rel. 42, Last sequence update)
DT   05-JUL-2004 (Rel. 44, Last annotation update)
DE   Prokineticin 1 precursor (Endocrine-gland-derived vascular endothelial
DE   growth factor) (EG-VEGF).
GN   Name=Prok1;
OS   Rattus norvegicus (Rat).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
OX   NCBI_TaxID=10116;
RN   [1]
RP   SEQUENCE FROM N.A.
RC   STRAIN=Sprague-Dawley;
RX   MEDLINE=22050031; PubMed=12054613; DOI=10.1016/S0006-291X(02)00239-5;
RA   Masuda Y., Takatsu Y., Terao Y., Kumano S., Ishibashi Y., Suenaga M.,
RA   Abe M., Fukusumi S., Watanabe T., Shintani Y., Yamada T., Hinuma S.,
RA   Inatomi N., Ohtaki T., Onda H., Fujino M.;
RT   "Isolation and identification of EG-VEGF/prokineticins as cognate
RT   ligands for two orphan G-protein-coupled receptors.";
RL   Biochem. Biophys. Res. Commun. 293:396-402(2002).
CC   -!- FUNCTION: Potently contract gastrointestinal (GI) smooth muscle.
CC       Induces proliferation, migration and fenestration (the formation
CC       of membrane discontinuities) in capillary endothelial cells
CC       derived from endocrine glands. Has little or no effect on a
CC       variety of other endothelial and non-endothelial cell types (By
CC       similarity).
CC   -!- SUBCELLULAR LOCATION: Secreted (By similarity).
CC   -!- SIMILARITY: Belongs to the prokinecitin family.
CC   ---------------------------------------------------------------------
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CC   between the Swiss Institute of Bioinformatics and the EMBL outstation -
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CC   entities requires a license agreement (See http://www.isb-sib.ch/announce/
CC   or send an email to license@isb-sib.ch).
CC   ---------------------------------------------------------------------
DR   EMBL; AY089983; AAM09104.1; -.
DR   HSSP; P25687; 1IMT.
DR   RGD; 620898; Prok1.
DR   InterPro; IPR009523; Prokineticin.
DR   Pfam; PF06607; Prokineticin; 1.
KW   Growth factor; Mitogen; Signal.
FT   SIGNAL        1     19       Potential.
FT   CHAIN        20    105       Prokineticin 1.
FT   DISULFID     26     38       By similarity.
FT   DISULFID     32     50       By similarity.
FT   DISULFID     37     78       By similarity.
FT   DISULFID     60     86       By similarity.
FT   DISULFID     80     96       By similarity.
SQ   SEQUENCE   105 AA;  11642 MW;  8DF0C42122B1C5B6 CRC64;

  Query Match             62.0%;  Score 286;  DB 1;  Length 105;
  Best Local Similarity   55.8%;  Pred. No. 4.2e-24;
  Matches   43;  Conservative   15;  Mismatches   19;  Indels    0;  Gaps    0;

Qy          1 AVITGACDKDSQCGGGMCCAVSIWVKSIRICTPMGKLGDSCHPLTRKVPFFGRRMHHTCP 60
              |||||||::| ||| | |||:|:|:: :|:|||:|: |: ||| : |:||| :| |||||
Db         20 AVITGACERDVQCGAGTCCAISLWLRGLRLCTPLGREGEECHPGSHKIPFFRKRQHHTCP 79

Qy         61 CLPGLACLRTSFNRFIC 77
              | | | | |    |: |
Db         80 CSPSLLCSRFPDGRYRC 96


RESULT 11
Q8K457
ID   Q8K457      PRELIMINARY;      PRT;    81 AA.
AC   Q8K457;
DT   01-OCT-2002 (TrEMBLrel. 22, Created)
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DT   01-OCT-2002 (TrEMBLrel. 22, Last sequence update)
DT   01-MAR-2004 (TrEMBLrel. 26, Last annotation update)
DE   Prokineticin 1 (Fragment).
GN   Name=Prok1; Synonyms=Pk1;
OS   Mus musculus (Mouse).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX   NCBI_TaxID=10090;
RN   [1]
RP   SEQUENCE FROM N.A.
RC   STRAIN=C57BL/6;
RX   MEDLINE=22022134; PubMed=12024206; DOI=10.1038/417405a;
RA   Cheng M.Y., Bullock C.M., Li C., Lee A.G., Bermak J.C., Belluzzi J.,
RA   Weaver D.R., Leslie F.M., Zhou Q.Y.;
RT   "Prokineticin 2 transmits the behavioural circadian rhythm of the
RT   suprachiasmatic nucleus.";
RL   Nature 417:405-410(2002).
DR   EMBL; AF487281; AAM49573.1; -.
DR   HSSP; P25687; 1IMT.
DR   MGD; MGI:2180370; Prok1.
DR   GO; GO:0005576; C:extracellular; IDA.
DR   GO; GO:0000187; P:activation of MAPK; IDA.
DR   GO; GO:0007623; P:circadian rhythm; TAS.
DR   GO; GO:0008284; P:positive regulation of cell proliferation; IDA.
DR   GO; GO:0045765; P:regulation of angiogenesis; IDA.
DR   InterPro; IPR009523; Prokineticin.
DR   Pfam; PF06607; Prokineticin; 1.
FT   NON_TER       1      1
SQ   SEQUENCE   81 AA;  9192 MW;  7BBE3EC6B16A8011 CRC64;

  Query Match             55.7%;  Score 257;  DB 2;  Length 81;
  Best Local Similarity   51.4%;  Pred. No. 5.6e-21;
  Matches   37;  Conservative   15;  Mismatches   20;  Indels    0;  Gaps    0;

Qy          6 ACDKDSQCGGGMCCAVSIWVKSIRICTPMGKLGDSCHPLTRKVPFFGRRMHHTCPCLPGL 65
              ||:|  ||| | |||:|:|:: :|:|||:|: |: ||| : |:||  :| |||||| | |
Db          1 ACERDIQCGAGTCCAISLWLRGLRLCTPLGREGEECHPGSHKIPFLRKRQHHTCPCSPSL 60

Qy         66 ACLRTSFNRFIC 77
                |:|
Db         61 LCSRFPDGRYRC 72


RESULT 12
BV8_BOMVA
ID   BV8_BOMVA      STANDARD;      PRT;    96 AA.
AC   Q9PW66;
DT   16-OCT-2001 (Rel. 40, Created)
DT   16-OCT-2001 (Rel. 40, Last sequence update)
DT   05-JUL-2004 (Rel. 44, Last annotation update)
DE   Protein Bv8 precursor.
OS   Bombina variegata (Yellow-bellied toad).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Amphibia; Batrachia; Anura; Archeobatrachia; Bombinatoridae; Bombina.
OX   NCBI_TaxID=8348;
RN   [1]
RP   SEQUENCE FROM N.A., AND PARTIAL SEQUENCE.
RC   TISSUE=Skin secretion;
RX   MEDLINE=99349621; PubMed=10422759; DOI=10.1016/S0014-2999(99)00229-0;
RA   Mollay C., Wechselberger C., Mignogna G., Negri L., Melchiorri P.,
RA   Barra D., Kreil G.;
RT   "Bv8, a small protein from frog skin and its homologue from snake
RT   venom induce hyperalgesia in rats.";
RL   Eur. J. Pharmacol. 374:189-196(1999).
CC   -!- FUNCTION: Potently contract gastrointestinal (GI) smooth muscle.
CC       Induces hyperalgesia.
CC   -!- SUBCELLULAR LOCATION: Secreted.
CC   -!- SIMILARITY: Belongs to the prokinecitin family.
CC   ---------------------------------------------------------------------
CC   This SWISS-PROT entry is copyright. It is produced through a collaboration
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CC   entities requires a license agreement (See http://www.isb-sib.ch/announce/
CC   or send an email to license@isb-sib.ch).
CC   ---------------------------------------------------------------------
DR   EMBL; AF168790; AAD45816.1; -.
DR   HSSP; P25687; 1IMT.
DR   InterPro; IPR009523; Prokineticin.
DR   Pfam; PF06607; Prokineticin; 1.
KW   Direct protein sequencing; Signal.
FT   SIGNAL        1     19
FT   CHAIN        20     96       Protein Bv8.
FT   DISULFID     26     38       By similarity.
FT   DISULFID     32     50       By similarity.
FT   DISULFID     37     78       By similarity.
FT   DISULFID     60     86       By similarity.
FT   DISULFID     80     95       By similarity.
SQ   SEQUENCE   96 AA;  10102 MW;  A12490A7437609B4 CRC64;

  Query Match             53.9%;  Score 248.5;  DB 1;  Length 96;
  Best Local Similarity   54.5%;  Pred. No. 5.7e-20;
  Matches   42;  Conservative   10;  Mismatches   24;  Indels    1;  Gaps    1;

Qy          1 AVITGACDKDSQCGGGMCCAVSIWVKSIRICTPMGKLGDSCHPLTRKVPFFGRRMHHTCP 60
              |||||||||| ||| | ||| | | ::|| | |:|  |: ||| : |||: |:|:   ||
Db         20 AVITGACDKDVQCGSGTCCAASAWSRNIRFCIPLGNSGEDCHPASHKVPYDGKRLSSLCP 79

Qy         61 CLPGLACLRTSFNRFIC 77
              |  || | : |  :| |
Db         80 CKSGLTCSK-SGEKFKC 95


RESULT 13
Q8JFQ0
ID   Q8JFQ0      PRELIMINARY;      PRT;    96 AA.
AC   Q8JFQ0;
DT   01-OCT-2002 (TrEMBLrel. 22, Created)
DT   01-OCT-2002 (TrEMBLrel. 22, Last sequence update)
DT   01-MAR-2004 (TrEMBLrel. 26, Last annotation update)
DE   Bv8 protein homolog 2.
OS   Bombina maxima (Giant fire-bellied toad) (Chinese red belly toad).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Amphibia; Batrachia; Anura; Archeobatrachia; Bombinatoridae; Bombina.
OX   NCBI_TaxID=161274;
RN   [1]
RP   SEQUENCE FROM N.A.
RC   TISSUE=Skin secretions;
RX   MEDLINE=22515712; PubMed=12628381; DOI=10.1016/S1096-4959(02)00294-4;
RA   Lai R., Liu H., Lee W.H., Zhang Y.;
RT   "Two novel Bv8-like peptides from skin secretions of the toad Bombina
RT   maxima.";
RL   Comp. Biochem. Physiol. B, Biochem. Mol. Biol. 134:509-514(2003).
DR   EMBL; AF411091; AAN03822.1; -.
DR   HSSP; P25687; 1IMT.
DR   InterPro; IPR009523; Prokineticin.
DR   Pfam; PF06607; Prokineticin; 1.
SQ   SEQUENCE   96 AA;  10198 MW;  EC4EAA5EFB49B2F0 CRC64;

  Query Match             53.9%;  Score 248.5;  DB 2;  Length 96;
  Best Local Similarity   53.2%;  Pred. No. 5.7e-20;
  Matches   41;  Conservative   12;  Mismatches   23;  Indels    1;  Gaps    1;

Qy          1 AVITGACDKDSQCGGGMCCAVSIWVKSIRICTPMGKLGDSCHPLTRKVPFFGRRMHHTCP 60
              ||||||||:| ||| | ||| |:| ::|| | |:|  |: ||| : |||: |:|:   ||
Db         20 AVITGACDRDVQCGSGTCCAASLWSRNIRFCVPLGNNGEECHPASHKVPYNGKRLSSLCP 79

Qy         61 CLPGLACLRTSFNRFIC 77
              |  || | : |  :| |
Db         80 CKSGLTCSK-SGEKFQC 95


RESULT 14
Q8JFE6
ID   Q8JFE6      PRELIMINARY;      PRT;    96 AA.
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AC   Q8JFE6;
DT   01-OCT-2002 (TrEMBLrel. 22, Created)
DT   01-OCT-2002 (TrEMBLrel. 22, Last sequence update)
DT   05-JUL-2004 (TrEMBLrel. 27, Last annotation update)
DE   BM8-a protein precursor (Bv8 protein homolog 1).
OS   Bombina maxima (Giant fire-bellied toad) (Chinese red belly toad).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Amphibia; Batrachia; Anura; Archeobatrachia; Bombinatoridae; Bombina.
OX   NCBI_TaxID=161274;
RN   [1]
RP   SEQUENCE FROM N.A.
RC   TISSUE=Skin;
RA   Chen T., Farragher S., Bjourson A.J., Orr D.F., Rao P., Shaw C.;
RT   "Granular gland transcriptomes in stimulated amphibian skin
RT   secretions.";
RL   J. Biochem. 371:125-130(2003).
RN   [2]
RP   SEQUENCE FROM N.A.
RC   TISSUE=Skin secretions;
RX   MEDLINE=22515712; PubMed=12628381; DOI=10.1016/S1096-4959(02)00294-4;
RA   Lai R., Liu H., Lee W.H., Zhang Y.;
RT   "Two novel Bv8-like peptides from skin secretions of the toad Bombina
RT   maxima.";
RL   Comp. Biochem. Physiol. B, Biochem. Mol. Biol. 134:509-514(2003).
DR   EMBL; AJ440230; CAD29340.1; -.
DR   EMBL; AF411090; AAN03821.1; -.
DR   HSSP; P25687; 1IMT.
DR   InterPro; IPR009523; Prokineticin.
DR   Pfam; PF06607; Prokineticin; 1.
KW   Signal.
FT   SIGNAL        1     19       Potential.
FT   CHAIN        20     96       BM8-a protein.
SQ   SEQUENCE   96 AA;  10117 MW;  2269AAC8654B18A6 CRC64;

  Query Match             50.7%;  Score 233.5;  DB 2;  Length 96;
  Best Local Similarity   50.6%;  Pred. No. 2.7e-18;
  Matches   39;  Conservative   13;  Mismatches   24;  Indels    1;  Gaps    1;

Qy          1 AVITGACDKDSQCGGGMCCAVSIWVKSIRICTPMGKLGDSCHPLTRKVPFFGRRMHHTCP 60
              ||||| ||:|:|||  | ||| | : ::|| | |:|  |: ||| : |||: |:|:   ||
Db         20 AVITGVCDRDAQCGSGTCCAASAFSRNIRFCVPLGNNGEECHPASHKVPYNGKRLSSLCP 79

Qy         61 CLPGLACLRTSFNRFIC 77
              |  || | : |  :| |
Db         80 CNTGLTCSK-SGEKFQC 95


RESULT 15
Q8JFX9
ID   Q8JFX9      PRELIMINARY;      PRT;    96 AA.
AC   Q8JFX9;
DT   01-OCT-2002 (TrEMBLrel. 22, Created)
DT   01-OCT-2002 (TrEMBLrel. 22, Last sequence update)
DT   01-MAR-2004 (TrEMBLrel. 26, Last annotation update)
DE   BM8-e protein precursor.
OS   Bombina maxima (Giant fire-bellied toad) (Chinese red belly toad).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Amphibia; Batrachia; Anura; Archeobatrachia; Bombinatoridae; Bombina.
OX   NCBI_TaxID=161274;
RN   [1]
RP   SEQUENCE FROM N.A.
RC   TISSUE=Skin;
RA   Chen T., Farragher S., Bjourson A.J., Orr D.F., Rao P., Shaw C.;
RT   "Granular gland transcriptomes in stimulated amphibian skin
RT   secretions.";
RL   J. Biochem. 371:125-130(2003).
DR   EMBL; AJ440234; CAD29344.1; -.
DR   HSSP; P25687; 1IMT.
DR   InterPro; IPR009523; Prokineticin.
DR   Pfam; PF06607; Prokineticin; 1.
KW   Signal.
FT   SIGNAL        1     19       Potential.
FT   CHAIN        20     96       BM8-e protein.
SQ   SEQUENCE   96 AA;  10127 MW;  226A65C8654B18A6 CRC64;

  Query Match             50.4%;  Score 232.5;  DB 2;  Length 96;
  Best Local Similarity   50.6%;  Pred. No. 3.4e-18;
  Matches   39;  Conservative   13;  Mismatches   24;  Indels    1;  Gaps    1;

Qy          1 AVITGACDKDSQCGGGMCCAVSIWVKSIRICTPMGKLGDSCHPLTRKVPFFGRRMHHTCP 60
              ||||| ||:|:|||  | ||| | : ::|| | |:|  |: ||| : |||: |:|:   ||
Db         20 AVITGVCDRDAQCGSGTCCAASAFSRNIRFCVPLGNNGEECHPASHKVPYNGKRLSSLCP 79

Qy         61 CLPGLACLRTSFNRFIC 77
              |  || | : |  :| |
Db         80 CNTGLTCPK-SGEKFQC 95


RESULT 16
Q8JFY1
ID   Q8JFY1      PRELIMINARY;      PRT;    96 AA.
AC   Q8JFY1;
DT   01-OCT-2002 (TrEMBLrel. 22, Created)
DT   01-OCT-2002 (TrEMBLrel. 22, Last sequence update)
DT   01-MAR-2004 (TrEMBLrel. 26, Last annotation update)
DE   BM8-c protein precursor.
OS   Bombina maxima (Giant fire-bellied toad) (Chinese red belly toad).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Amphibia; Batrachia; Anura; Archeobatrachia; Bombinatoridae; Bombina.
OX   NCBI_TaxID=161274;
RN   [1]
RP   SEQUENCE FROM N.A.
RC   TISSUE=Skin;
RA   Chen T., Farragher S., Bjourson A.J., Orr D.F., Rao P., Shaw C.;
RT   "Granular gland transcriptomes in stimulated amphibian skin
RT   secretions.";
RL   J. Biochem. 371:125-130(2003).
DR   EMBL; AJ440232; CAD29342.1; -.
DR   HSSP; P25687; 1IMT.
DR   InterPro; IPR009523; Prokineticin.
DR   Pfam; PF06607; Prokineticin; 1.
KW   Signal.
FT   SIGNAL        1     19       Potential.
FT   CHAIN        20     96       BM8-c protein.
SQ   SEQUENCE   96 AA;  10103 MW;  227EA1A5C49B18A6 CRC64;

  Query Match             50.4%;  Score 232.5;  DB 2;  Length 96;
  Best Local Similarity   49.4%;  Pred. No. 3.4e-18;
  Matches   38;  Conservative   14;  Mismatches   24;  Indels    1;  Gaps    1;

Qy          1 AVITGACDKDSQCGGGMCCAVSIWVKSIRICTPMGKLGDSCHPLTRKVPFFGRRMHHTCP 60
              ||||| ||:|:|||  | ||| | : :::| | |:|  |: ||| : |||: |:|:   ||
Db         20 AVITGVCDRDAQCGSGTCCAASAFSRNVRFCVPLGNNGEECHPASHKVPYNGKRLSSLCP 79

Qy         61 CLPGLACLRTSFNRFIC 77
              |  || | : |  :| |
Db         80 CNTGLTCSK-SGEKFQC 95


RESULT 17
Q8JFY0
ID   Q8JFY0      PRELIMINARY;      PRT;    96 AA.
AC   Q8JFY0;
DT   01-OCT-2002 (TrEMBLrel. 22, Created)
DT   01-OCT-2002 (TrEMBLrel. 22, Last sequence update)
DT   01-MAR-2004 (TrEMBLrel. 26, Last annotation update)
DE   BM8-d protein precursor.
OS   Bombina maxima (Giant fire-bellied toad) (Chinese red belly toad).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Amphibia; Batrachia; Anura; Archeobatrachia; Bombinatoridae; Bombina.
OX   NCBI_TaxID=161274;
RN   [1]
RP   SEQUENCE FROM N.A.
RC   TISSUE=Skin;
RA   Chen T., Farragher S., Bjourson A.J., Orr D.F., Rao P., Shaw C.;
RT   "Granular gland transcriptomes in stimulated amphibian skin
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```
RT   secretions.";
RL   J. Biochem. 371:125-130(2003).
DR   EMBL; AJ440233; CAD29343.1; -.
DR   HSSP; P25687; 1IMT.
DR   InterPro; IPR009523; Prokineticin.
DR   Pfam; PF06607; Prokineticin; 1.
KW   Signal.
FT   SIGNAL        1     19       Potential.
FT   CHAIN        20     96       BM8-d protein.
SQ   SEQUENCE   96 AA;  10057 MW;  2269AAD4154B18A6 CRC64;

  Query Match             49.9%;  Score 230;  DB 2;  Length 96;
  Best Local Similarity   51.4%;  Pred. No. 6.5e-18;
  Matches   36;  Conservative   13;  Mismatches   21;  Indels    0;  Gaps    0;

Qy          1 AVITGACDKDSQCGGGMCCAVSIWVKSIRICTPMGKLGDSCHPLTRKVPFFGRRMHHTCP 60
              ||||| ||:|:||| | ||| | : ::|| | |:|  |: ||| : |||: |:|:   ||
Db         20 AVITGVCDRDAQCGSGTCCAASAFSRNIRFCVPLGNNGEECHPASHKVPYNGKRLSSLCP 79

Qy         61 CLPGLACLRT 70
              |  || | ::
Db         80 CNTGLTCSKS 89


RESULT 18
Q8JFX8
ID   Q8JFX8      PRELIMINARY;      PRT;    96 AA.
AC   Q8JFX8;
DT   01-OCT-2002 (TrEMBLrel. 22, Created)
DT   01-OCT-2002 (TrEMBLrel. 22, Last sequence update)
DT   01-MAR-2004 (TrEMBLrel. 26, Last annotation update)
DE   BM8-f protein precursor.
OS   Bombina maxima (Giant fire-bellied toad) (Chinese red belly toad).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Amphibia; Batrachia; Anura; Archeobatrachia; Bombinatoridae; Bombina.
OX   NCBI_TaxID=161274;
RN   [1]
RP   SEQUENCE FROM N.A.
RC   TISSUE=Skin;
RA   Chen T., Farragher S., Bjourson A.J., Orr D.F., Rao P., Shaw C.;
RT   "Granular gland transcriptomes in stimulated amphibian skin
RT   secretions.";
RL   J. Biochem. 371:125-130(2003).
DR   EMBL; AJ440235; CAD29345.1; -.
DR   HSSP; P25687; 1IMT.
DR   InterPro; IPR009523; Prokineticin.
DR   Pfam; PF06607; Prokineticin; 1.
KW   Signal.
FT   SIGNAL        1     19       Potential.
FT   CHAIN        20     96       BM8-f protein.
SQ   SEQUENCE   96 AA;  10058 MW;  2269A070FFE118A6 CRC64;

  Query Match             48.9%;  Score 225.5;  DB 2;  Length 96;
  Best Local Similarity   49.4%;  Pred. No. 2.1e-17;
  Matches   38;  Conservative   13;  Mismatches   25;  Indels    1;  Gaps    1;

Qy          1 AVITGACDKDSQCGGGMCCAVSIWVKSIRICTPMGKLGDSCHPLTRKVPFFGRRMHHTCP 60
              ||||| ||:|:||| | ||| | : ::|| | |:|  |: ||| : |||  |:|:   ||
Db         20 AVITGVCDRDAQCGSGTCCAASAFSRNIRFCVPLGNNGEECHPASHKVPSDGKRLSSLCP 79

Qy         61 CLPGLACLRTSFNRFIC 77
              |  || | : |  :: |
Db         80 CNTGLTCSK-SGEKYQC 95


RESULT 19
Q8JFY2
ID   Q8JFY2      PRELIMINARY;      PRT;    96 AA.
AC   Q8JFY2;
DT   01-OCT-2002 (TrEMBLrel. 22, Created)
DT   01-OCT-2002 (TrEMBLrel. 22, Last sequence update)
DT   01-MAR-2004 (TrEMBLrel. 26, Last annotation update)
DE   BM8-b protein precursor.
OS   Bombina maxima (Giant fire-bellied toad) (Chinese red belly toad).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Amphibia; Batrachia; Anura; Archeobatrachia; Bombinatoridae; Bombina.
OX   NCBI_TaxID=161274;
RN   [1]
RP   SEQUENCE FROM N.A.
RC   TISSUE=Skin;
RA   Chen T., Farragher S., Bjourson A.J., Orr D.F., Rao P., Shaw C.;
RT   "Granular gland transcriptomes in stimulated amphibian skin
RT   secretions.";
RL   J. Biochem. 371:125-130(2003).
DR   EMBL; AJ440231; CAD29341.1; -.
DR   HSSP; P25687; 1IMT.
DR   InterPro; IPR009523; Prokineticin.
DR   Pfam; PF06607; Prokineticin; 1.
KW   Signal.
FT   SIGNAL        1     19       Potential.
FT   CHAIN        20     96       BM8-b protein.
SQ   SEQUENCE   96 AA;  10186 MW;  D77CAACFF54B020C CRC64;

  Query Match             47.4%;  Score 218.5;  DB 2;  Length 96;
  Best Local Similarity   48.1%;  Pred. No. 1.2e-16;
  Matches   37;  Conservative   14;  Mismatches   25;  Indels    1;  Gaps    1;

Qy          1 AVITGACDKDSQCGGGMCCAVSIWVKSIRICTPMGKLGDSCHPLTRKVPFFGRRMHHTCP 60
              |||||  |:|:||| | ||| | : ::|| | |:|  |: ||| : |||: |:|:   ||
Db         20 AVITGVRDRDAQCGSGTCCAASAFSRNIRFCVPLGNNGEECHPASHKVPYNGKRLSSLCP 79

Qy         61 CLPGLACLRTSFNRFIC 77
              |  || | : |  :: |
Db         80 CNTGLTCSK-SGEKYQC 95


RESULT 20
Q8VEJ3
ID   Q8VEJ3      PRELIMINARY;      PRT;   221 AA.
AC   Q8VEJ3;
DT   01-MAR-2002 (TrEMBLrel. 20, Created)
DT   01-MAR-2002 (TrEMBLrel. 20, Last sequence update)
DT   01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
DE   Dickkopf homolog 4.
GN   Name=Dkk4;
OS   Mus musculus (Mouse).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX   NCBI_TaxID=10090;
RN   [1]
RP   SEQUENCE FROM N.A.
RC   STRAIN=CZECH II; TISSUE=Mammary tumor;
RX   MEDLINE=22388257; PubMed=12477932; DOI=10.1073/pnas.242603899;
RA   Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,
RA   Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,
RA   Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
RA   Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
RA   Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
RA   Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,
RA   Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,
RA   Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,
RA   Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,
RA   Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
RA   Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
RA   Fahey J., Helton E., Ketteman M., Madan A., Rodrigues S., Sanchez A.,
RA   Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,
RA   Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,
RA   Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M., Butterfield Y.S.,
RA   Krzywinski M.I., Skalska U., Smailus D.E., Schnerch A., Schein J.E.,
RA   Jones S.J., Marra M.A.;
RT   "Generation and initial analysis of more than 15,000 full-length human
RT   and mouse cDNA sequences.";
RL   Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).
RN   [2]
RP   SEQUENCE FROM N.A.
RC   STRAIN=CZECH II; TISSUE=Mammary tumor;
```

```
RA   Strausberg R.;
RL   Submitted (DEC-2001) to the EMBL/GenBank/DDBJ databases.
DR   EMBL; BC018400; AAH18400.1; -.
DR   HSSP; P25687; 1IMT.
DR   MGD; MGI:2385299; Dkk4.
DR   GO; GO:0005615; C:extracellular space; TAS.
DR   Pfam; PF04706; Dickkopf_N; 1.
SQ   SEQUENCE   221 AA;  24260 MW;  670AD9F750BF1715 CRC64;

  Query Match             24.4%;  Score 112.5;  DB 2;  Length 221;
  Best Local Similarity   37.9%;  Pred. No. 0.00016;
  Matches   25;  Conservative    7;  Mismatches   23;  Indels   11;  Gaps    3;

Qy          6 ACDKDSQCGGGMCCAVSIWVKSIRICTPMGKLGDSC----HPLTRKVPFFGRRMHHTCPC 61
              :| : | || |:|||   | |   || |: : |  |     |  | : |   :|    | |
Db        144 SCLRTSDCGPGLCCARHFWTK---ICKPVLREGQVCSRRGHKDTAQAPEIFQR----CDC 196

Qy         62 LPGLAC 67
                ||| |
Db        197 GPGLTC 202


RESULT 21
Q8UUX3
ID   Q8UUX3      PRELIMINARY;      PRT;    96 AA.
AC   Q8UUX3;
DT   01-MAR-2002 (TrEMBLrel. 20, Created)
DT   01-MAR-2002 (TrEMBLrel. 20, Last sequence update)
DT   01-MAR-2002 (TrEMBLrel. 20, Last annotation update)
DE   Dkk-1 (Fragment).
GN   Name=Dkk-1;
OS   Gallus gallus (Chicken).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Archosauria; Aves; Neognathae; Galliformes; Phasianidae; Phasianinae;
OC   Gallus.
OX   NCBI_TaxID=9031;
RN   [1]
RP   SEQUENCE FROM N.A.
RX   MEDLINE=21559221; PubMed=11702953; DOI=10.1016/S1534-5807(01)00041-7;
RA   Mukhopadhyay M., Shtrom S., Rodriguez-Esteban C., Chen L., Tsukui T.,
RA   Gomer L., Dorward D.W., Glinka A., Grinberg A., Huang S.P., Niehrs C.,
RA   Belmonte J.C.I., Westphal H.;
RT   "Dickkopf1 is required for embryonic head induction and limb
RT   morphogenesis in the mouse.";
RL   Dev. Cell 1:423-434(2001).
RN   [2]
RP   SEQUENCE FROM N.A.
RA   Tsukui T., Belmonte J.C.;
RL   Submitted (JUL-2001) to the EMBL/GenBank/DDBJ databases.
DR   EMBL; AY049017; AAL07515.1; -.
DR   HSSP; P25687; 1IMT.
FT   NON_TER       1      1
SQ   SEQUENCE   96 AA;  10756 MW;  043E6A647D5AF4E7 CRC64;

  Query Match             23.9%;  Score 110;  DB 2;  Length 96;
  Best Local Similarity   37.7%;  Pred. No. 0.00014;
  Matches   23;  Conservative    6;  Mismatches   28;  Indels    4;  Gaps    2;

Qy          7 CDKDSQCGGGMCCAVSIWVKSIRICTPMGKLGDSCHPLTRKVPFFGRRMHHTCPCLPGLA 66
              | : | |  |:|||   | |   || |: : |  |    ||    |  :   |||  |:|
Db         20 CLRSSDCAAGLCCARHFWSK---ICKPVLREGQVCTRHRRK-GAHGLEIFQRCPCAEGMA 75

Qy         67 C 67
              |
Db         76 C 76


RESULT 22
DKK1_MOUSE
ID   DKK1_MOUSE     STANDARD;      PRT;   272 AA.
AC   O54908;
DT   16-OCT-2001 (Rel. 40, Created)
DT   16-OCT-2001 (Rel. 40, Last sequence update)
DT   05-JUL-2004 (Rel. 44, Last annotation update)
DE   Dickkopf related protein-1 precursor (Dkk-1) (Dickkopf-1) (mDkk-1).
GN   Name=Dkk1;
OS   Mus musculus (Mouse).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX   NCBI_TaxID=10090;
RN   [1]
RP   SEQUENCE FROM N.A.
RX   MEDLINE=98111224; PubMed=9450748; DOI=10.1038/34848;
RA   Glinka A., Wu W., Delius H., Monaghan A.P., Blumenstock C., Niehrs C.;
RT   "Dickkopf-1 is a member of a new family of secreted proteins and
RT   functions in head induction.";
RL   Nature 391:357-362(1998).
CC   -!- FUNCTION: Inhibitor of Wnt signaling pathway.
CC   -!- SUBCELLULAR LOCATION: Secreted.
CC   -!- SIMILARITY: Belongs to the dickkopf family.
CC   ---------------------------------------------------------------------
CC   This SWISS-PROT entry is copyright. It is produced through a collaboration
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CC   or send an email to license@isb-sib.ch).
CC   ---------------------------------------------------------------------
DR   EMBL; AF030433; AAC02426.1; -.
DR   HSSP; P25687; 1IMT.
DR   MGD; MGI:1329040; Dkk1.
DR   InterPro; IPR006796; dickkopf_N.
DR   Pfam; PF04706; Dickkopf_N; 1.
KW   Developmental protein; Glycoprotein; Signal; Wnt signaling pathway.
FT   SIGNAL        1     31       Potential.
FT   CHAIN        32    272       Dickkopf related protein-1.
FT   DOMAIN       86    141       DKK-type Cys-1.
FT   DOMAIN      195    269       DKK-type Cys-2.
FT   CARBOHYD    262    262       N-linked (GlcNAc. . .) (Potential).
SQ   SEQUENCE   272 AA;  29268 MW;  AB9FA35DFA57D3EE CRC64;

  Query Match             22.3%;  Score 103;  DB 1;  Length 272;
  Best Local Similarity   39.3%;  Pred. No. 0.0022;
  Matches   24;  Conservative    4;  Mismatches   29;  Indels    4;  Gaps    2;

Qy          7 CDKDSQCGGGMCCAVSIWVKSIRICTPMGKLGDSCHPLTRKVPFFGRRMHHTCPCLPGLA 66
              | : | |  |:|||   | |   || |: | |  |    ||    |  :   | |  |||
Db        195 CLRSSDCAAGLCCARHFWSK---ICKPVLKEGQVCTKHKRK-GSHGLEIFQRCYCGEGLA 250

Qy         67 C 67
              |
Db        251 C 251


RESULT 23
Q80UL5
ID   Q80UL5      PRELIMINARY;      PRT;   272 AA.
AC   Q80UL5;
DT   01-JUN-2003 (TrEMBLrel. 24, Created)
DT   01-JUN-2003 (TrEMBLrel. 24, Last sequence update)
DT   01-MAR-2004 (TrEMBLrel. 26, Last annotation update)
DE   Dickkopf homolog 1.
GN   Name=Dkk1;
OS   Mus musculus (Mouse).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX   NCBI_TaxID=10090;
RN   [1]
RP   SEQUENCE FROM N.A.
RC   STRAIN=B5/EGFP transgenic ICR mice; TISSUE=Trophoblast Stem Cell;
RX   MEDLINE=22388257; PubMed=12477932; DOI=10.1073/pnas.242603899;
RA   Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,
RA   Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,
RA   Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
RA   Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
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RA   Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
RA   Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,
RA   Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,
RA   Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,
RA   Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,
RA   Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
RA   Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
RA   Fahey J., Helton E., Ketteman M., Madan A., Rodrigues S., Sanchez A.,
RA   Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,
RA   Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,
RA   Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M., Butterfield Y.S.,
RA   Krzywinski M.I., Skalska U., Smailus D.E., Schnerch A., Schein J.E.,
RA   Jones S.J., Marra M.A.;
RT   "Generation and initial analysis of more than 15,000 full-length human
RT   and mouse cDNA sequences.";
RL   Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).
RN   [2]
RP   SEQUENCE FROM N.A.
RC   STRAIN=B5/EGFP transgenic ICR mice; TISSUE=Trophoblast Stem Cell;
RA   Strausberg R.;
RL   Submitted (APR-2003) to the EMBL/GenBank/DDBJ databases.
DR   EMBL; BC050189; AAH50189.1; -.
DR   HSSP; P25687; 1IMT.
DR   MGD; MGI:1329040; Dkk1.
DR   GO; GO:0005615; C:extracellular space; TAS.
DR   InterPro; IPR006796; dickkopf_N.
DR   Pfam; PF04706; Dickkopf_N; 1.
SQ   SEQUENCE   272 AA;  29297 MW;  ADFAC3E7B8858A9E CRC64;

  Query Match             22.3%;  Score 103;  DB 2;  Length 272;
  Best Local Similarity   39.3%;  Pred. No. 0.0022;
  Matches   24;  Conservative    4;  Mismatches   29;  Indels    4;  Gaps    2;

Qy          7 CDKDSQCGGGMCCAVSIWVKSIRICTPMGKLGDSCHPLTRKVPFFGRRMHHTCPCLPGLA 66
              | : | |  |:|||   | |   || |: | |  |    ||    |  :   | |  |||
Db        195 CLRSSDCAAGLCCARHFWSK---ICKPVLKEGQVCTKHKRK-GSHGLEIFQRCYCGEGLA 250

Qy         67 C 67
              |
Db        251 C 251


RESULT 24
DKK4_HUMAN
ID   DKK4_HUMAN     STANDARD;      PRT;   224 AA.
AC   Q9UBT3; Q9Y4C3;
DT   16-OCT-2001 (Rel. 40, Created)
DT   16-OCT-2001 (Rel. 40, Last sequence update)
DT   25-JAN-2005 (Rel. 46, Last annotation update)
DE   Dickkopf related protein-4 precursor (Dkk-4) (Dickkopf-4) (hDkk-4).
GN   Name=DKK4;
OS   Homo sapiens (Human).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX   NCBI_TaxID=9606;
RN   [1]
RP   SEQUENCE FROM N.A., AND SEQUENCE OF 19-28 AND 134-144.
RX   MEDLINE=20035735; PubMed=10570958; DOI=10.1016/S0378-1119(99)00365-0;
RA   Krupnik V.E., Sharp J.D., Jiang C., Robison K., Chickering T.W.,
RA   Amaravadi L., Brown D.E., Guyot D., Mays G., Leiby K., Chang B.,
RA   Duong T., Goodearl A.D.J., Gearing D.P., Sokol S.Y., McCarthy S.A.;
RT   "Functional and structural diversity of the human Dickkopf gene
RT   family.";
RL   Gene 238:301-313(1999).
RN   [2]
RP   SEQUENCE FROM N.A.
RA   Tate G., Mitsuya T.;
RT   "Human Dickkopf as well as DAN family members, Cerberus and Gremlin,
RT   are preferentially expressed in the epithelial malignant cell lines.";
RL   J. Biochem. Mol. Biol. Biophys. 3:239-242(1999).
RN   [3]
RP   SEQUENCE FROM N.A.
RA   Tate G., Suzuki T., Mitsuya T.;
RL   Submitted (SEP-1998) to the EMBL/GenBank/DDBJ databases.
RN   [4]
RP   SEQUENCE OF 19-33.
RX   PubMed=15340161; DOI=10.1110/ps.04682504;
RA   Zhang Z., Henzel W.J.;
RT   "Signal peptide prediction based on analysis of experimentally
RT   verified cleavage sites.";
RL   Protein Sci. 13:2819-2824(2004).
CC   -!- FUNCTION: Inhibitor of Wnt signaling pathway.
CC   -!- SUBCELLULAR LOCATION: Secreted.
CC   -!- TISSUE SPECIFICITY: Expressed in cerebellum, T-cells, esophagus
CC       and lung.
CC   -!- PTM: Appears to be not glycosylated.
CC   -!- PTM: Can be proteolytically processed by a furin-like protease.
CC   -!- SIMILARITY: Belongs to the dickkopf family.
CC   ----------------------------------------------------------------------
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CC   or send an email to license@isb-sib.ch).
CC   ----------------------------------------------------------------------
DR   EMBL; AF177397; AAF02677.1; -.
DR   EMBL; AB018005; BAA33475.1; -.
DR   EMBL; AB018003; BAA33475.1; JOINED.
DR   EMBL; AB018004; BAA33475.1; JOINED.
DR   EMBL; AB017788; BAA33438.1; -.
DR   HSSP; P25687; 1IMT.
DR   Genew; HGNC:2894; DKK4.
DR   MIM; 605417; -.
DR   GO; GO:0030178; P:negative regulation of Wnt receptor signali. . .; NAS.
DR   InterPro; IPR006796; dickkopf_N.
DR   Pfam; PF04706; Dickkopf_N; 1.
KW   Developmental protein; Direct protein sequencing; Signal;
KW   Wnt signaling pathway.
FT   SIGNAL       1     18
FT   CHAIN       19    224       Dickkopf related protein-4.
FT   CHAIN      134    224       Dickkopf related protein-4 short form.
FT   DOMAIN      41     90       DKK-type Cys-1.
FT   DOMAIN     145    218       DKK-type Cys-2.
FT   CONFLICT    93     93       M -> L (in Ref. 3).
SQ   SEQUENCE   224 AA;  24875 MW;  45F8EBC476961357 CRC64;

  Query Match             22.0%;  Score 101.5;  DB 1;  Length 224;
  Best Local Similarity   36.4%;  Pred. No. 0.0027;
  Matches   24;  Conservative    6;  Mismatches   25;  Indels   11;  Gaps    3;

Qy          6 ACDKDSQCGGGMCCAVSIWVKSIRICTPMGKLGDSC----HPLTRKVPFFGRRMHHTCPC 61
              :| :   || |:|||   | |   || |:   |  |     |  | : |   :|    | |
Db        144 SCLRTFDCGPGLCCARHFWTK---ICKPVLLEGQVCSRRGHKDTAQAPEIFQR----CDC 196

Qy         62 LPGLAC 67
              ||| |
Db        197 GPGLLC 202


RESULT 25
Q9PWH3
ID   Q9PWH3      PRELIMINARY;      PRT;   240 AA.
AC   Q9PWH3;
DT   01-MAY-2000 (TrEMBLrel. 13, Created)
DT   01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
DT   01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
DE   Dickkopf1.
GN   Name=dkk1;
OS   Brachydanio rerio (Zebrafish) (Danio rerio).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Actinopterygii; Neopterygii; Teleostei; Ostariophysi; Cypriniformes;
OC   Cyprinidae; Danio.
OX   NCBI_TaxID=7955;
RN   [1]
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RP   SEQUENCE FROM N.A.
RA   Hashimoto H.;
RL   Submitted (JAN-1999) to the EMBL/GenBank/DDBJ databases.
DR   EMBL; AB023488; BAA82135.1; -.
DR   ZFIN; ZDB-GENE-990708-5; dkk1.
DR   GO; GO:0005576; C:extracellular; IEA.
DR   GO; GO:0007275; P:development; IEA.
DR   GO; GO:0030178; P:negative regulation of Wnt receptor signali. . .; IEA.
DR   InterPro; IPR006796; dickkopf_N.
DR   Pfam; PF04706; Dickkopf_N; 1.
SQ   SEQUENCE   240 AA;  25985 MW;  AA6CF04C5901AE12 CRC64;

  Query Match             21.7%;  Score 100;  DB 2;  Length 240;
  Best Local Similarity   37.7%;  Pred. No. 0.0043;
  Matches   23;  Conservative    5;  Mismatches   29;  Indels    4;  Gaps    2;

Qy          7 CDKDSQCGGGMCCAVSIWVKSIRICTPMGKLGDSCHPLTRKVPFFGRRMHHTCPCLPGLA 66
              | : | |  |:|||   | |   || |: | |  |    ||    |  :   | |  ||:
Db        164 CLRSSDCAEGLCCARHFWSK---ICKPVLKEGQVCTKHKRK-GTHGLEIFQRCDCGEGLS 219

Qy         67 C 67
              |
Db        220 C 220


RESULT 26
DKK1_HUMAN
ID   DKK1_HUMAN     STANDARD;      PRT;   266 AA.
AC   O94907;
DT   16-OCT-2001 (Rel. 40, Created)
DT   16-OCT-2001 (Rel. 40, Last sequence update)
DT   25-JAN-2005 (Rel. 46, Last annotation update)
DE   Dickkopf related protein-1 precursor (Dkk-1) (Dickkopf-1) (hDkk-1)
DE   (SK) (UNQ492/PRO1008).
GN   Name=DKK1;
OS   Homo sapiens (Human).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX   NCBI_TaxID=9606;
RN   [1]
RP   SEQUENCE FROM N.A.
RC   TISSUE=Leiomyosarcoma;
RX   MEDLINE=99315900; PubMed=10383463; DOI=10.1074/jbc.274.27.19465;
RA   Fedi P., Bafico A., Nieto Soria A., Burgess W.H., Miki T.,
RA   Bottaro D.P., Kraus M.H., Aaronson S.A.;
RT   "Isolation and biochemical characterization of the human Dkk-1
RT   homologue, a novel inhibitor of mammalian Wnt signaling.";
RL   J. Biol. Chem. 274:19465-19472(1999).
RN   [2]
RP   SEQUENCE FROM N.A.
RC   TISSUE=Fetal kidney;
RX   MEDLINE=20035735; PubMed=10570958; DOI=10.1016/S0378-1119(99)00365-0;
RA   Krupnik V.E., Sharp J.D., Jiang C., Robison K., Chickering T.W.,
RA   Amaravadi L., Brown D.E., Guyot D., Mays G., Leiby K., Chang B.,
RA   Duong T., Goodearl A.D.J., Gearing D.P., Sokol S.Y., McCarthy S.A.;
RT   "Functional and structural diversity of the human Dickkopf gene
RT   family.";
RL   Gene 238:301-313(1999).
RN   [3]
RP   SEQUENCE FROM N.A.
RA   Tate G., Suzuki T., Mitsuya T.;
RL   Submitted (NOV-1998) to the EMBL/GenBank/DDBJ databases.
RN   [4]
RP   SEQUENCE FROM N.A.
RX   MEDLINE=20422487; PubMed=10965128;
RA   Roessler E., Du Y., Glinka A., Dutra A., Niehrs C., Muenke M.;
RT   "The genomic structure, chromosome location, and analysis of the human
RT   DKK1 head inducer gene as a candidate for holoprosencephaly.";
RL   Cytogenet. Cell Genet. 89:220-224(2000).
RN   [5]
RP   SEQUENCE FROM N.A.
RX   MEDLINE=22887296; PubMed=12975309; DOI=10.1101/gr.1293003;
RA   Clark H.F., Gurney A.L., Abaya E., Baker K., Baldwin D., Brush J.,
RA   Chen J., Chow B., Chui C., Crowley C., Currell B., Deuel B., Dowd P.,
RA   Eaton D., Foster J., Grimaldi C., Gu Q., Hass P.E., Heldens S.,
RA   Huang A., Kim H.S., Klimowski L., Jin Y., Johnson S., Lee J.,
RA   Lewis L., Liao D., Mark M., Robbie E., Sanchez C., Schoenfeld J.,
RA   Seshagiri S., Simmons L., Singh J., Smith V., Stinson J., Vagts A.,
RA   Vandlen R., Watanabe C., Wieand D., Woods K., Xie M.-H., Yansura D.,
RA   Yi S., Yu G., Yuan J., Zhang M., Zhang Z., Goddard A., Wood W.I.,
RA   Godowski P., Gray A.;
RT   "The secreted protein discovery initiative (SPDI), a large-scale
RT   effort to identify novel human secreted and transmembrane proteins: a
RT   bioinformatics assessment.";
RL   Genome Res. 13:2265-2270(2003).
RN   [6]
RP   SEQUENCE FROM N.A.
RC   TISSUE=Brain;
RX   MEDLINE=22388257; PubMed=12477932; DOI=10.1073/pnas.242603899;
RA   Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,
RA   Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,
RA   Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
RA   Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
RA   Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
RA   Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,
RA   Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,
RA   Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,
RA   Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,
RA   Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
RA   Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
RA   Fahey J., Helton E., Ketteman M., Madan A., Rodrigues S., Sanchez A.,
RA   Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,
RA   Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,
RA   Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,
RA   Butterfield Y.S.N., Krzywinski M.I., Skalska U., Smailus D.E.,
RA   Schnerch A., Schein J.E., Jones S.J.M., Marra M.A.;
RT   "Generation and initial analysis of more than 15,000 full-length human
RT   and mouse cDNA sequences.";
RL   Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).
RN   [7]
RP   SEQUENCE OF 32-46.
RX   PubMed=15340161; DOI=10.1110/ps.04682504;
RA   Zhang Z., Henzel W.J.;
RT   "Signal peptide prediction based on analysis of experimentally
RT   verified cleavage sites.";
RL   Protein Sci. 13:2819-2824(2004).
CC   -!- FUNCTION: Inhibitor of Wnt signaling pathway.
CC   -!- SUBCELLULAR LOCATION: Secreted.
CC   -!- TISSUE SPECIFICITY: Placenta.
CC   -!- SIMILARITY: Belongs to the dickkopf family.
CC   ----------------------------------------------------------------------
CC   This SWISS-PROT entry is copyright. It is produced through a collaboration
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CC   entities requires a license agreement (See http://www.isb-sib.ch/announce/
CC   or send an email to license@isb-sib.ch).
CC   ----------------------------------------------------------------------
DR   EMBL; AF127563; AAD21087.1; -.
DR   EMBL; AF177394; AAF02674.1; -.
DR   EMBL; AB020315; BAA34651.1; -.
DR   EMBL; AB020314; BAA34651.1; JOINED.
DR   EMBL; AF261158; AAG15544.1; -.
DR   EMBL; AF261157; AAG15544.1; JOINED.
DR   EMBL; AY359005; AAQ89364.1; -.
DR   EMBL; BC001539; AAH01539.1; -.
DR   HSSP; P25687; 1IMT.
DR   Genew; HGNC:2891; DKK1.
DR   H-InvDB; HIX0008834; -.
DR   MIM; 605189; -.
DR   GO; GO:0008083; F:growth factor activity; TAS.
DR   GO; GO:0004871; F:signal transducer activity; TAS.
DR   InterPro; IPR006796; dickkopf_N.
DR   Pfam; PF04706; Dickkopf_N; 1.
KW   Developmental protein; Direct protein sequencing; Glycoprotein;
```

```
KW   Signal; Wnt signaling pathway.
FT   SIGNAL        1     31
FT   CHAIN        32    266       Dickkopf related protein-1.
FT   DOMAIN       85    138       DKK-type Cys-1.
FT   DOMAIN      189    263       DKK-type Cys-2.
FT   CARBOHYD    256    256       N-linked (GlcNAc. . .) (Potential).
SQ   SEQUENCE   266 AA;  28671 MW;  5E878B2CCE4236BA CRC64;

  Query Match             21.7%;  Score 100;  DB 1;  Length 266;
  Best Local Similarity   37.7%;  Pred. No. 0.0047;
  Matches   23;  Conservative    5;  Mismatches   29;  Indels    4;  Gaps    2;

Qy          7 CDKDSQCGGGMCCAVSIWVKSIRICTPMGKLGDSCHPLTRKVPFFGRRMHHTCPCLPGLA 66
              | : | |  |:|||   | |   || |: | |  |    ||    |  :   | |  ||:
Db        189 CLRSSDCASGLCCARHFWSK---ICKPVLKEGQVCTKHRRK-GSHGLEIFQRCYCGEGLS 244

Qy         67 C 67
              |
Db        245 C 245


RESULT 27
Q9DDA4
ID   Q9DDA4      PRELIMINARY;      PRT;   255 AA.
AC   Q9DDA4;
DT   01-MAR-2001 (TrEMBLrel. 16, Created)
DT   01-MAR-2001 (TrEMBLrel. 16, Last sequence update)
DT   01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
DE   Dickkopf2 precursor.
GN   Name=dkk2;
OS   Xenopus laevis (African clawed frog).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Amphibia; Batrachia; Anura; Mesobatrachia; Pipoidea; Pipidae;
OC   Xenopodinae; Xenopus.
OX   NCBI_TaxID=8355;
RN   [1]
RP   SEQUENCE FROM N.A.
RA   Wu W., Glinka A., Delius H., Niehrs C.;
RL   Submitted (NOV-2000) to the EMBL/GenBank/DDBJ databases.
DR   EMBL; AJ300197; CAC17815.1; -.
DR   HSSP; P25687; 1IMT.
DR   GO; GO:0005576; C:extracellular; IEA.
DR   GO; GO:0007275; P:development; IEA.
DR   GO; GO:0030178; P:negative regulation of Wnt receptor signali. . .; IEA.
DR   InterPro; IPR006796; dickkopf_N.
DR   InterPro; IPR011052; Prot_amyl_inhib.
DR   Pfam; PF04706; Dickkopf_N; 1.
KW   Signal.
FT   SIGNAL        1     29       Potential.
FT   CHAIN        30    255       dickkopf2.
SQ   SEQUENCE   255 AA;  28096 MW;  F270B7DD0F4FCD73 CRC64;

  Query Match             21.5%;  Score 99;  DB 2;  Length 255;
  Best Local Similarity   36.1%;  Pred. No. 0.0059;
  Matches   22;  Conservative    6;  Mismatches   29;  Indels    4;  Gaps    2;

Qy          7 CDKDSQCGGGMCCAVSIWVKSIRICTPMGKLGDSCHPLTRKVPFFGRRMHHTCPCLPGLA 66
              | : : |  | |||   | |   || |:   |: |  | ||    |  :   | |  ||:
Db        179 CLRSTDCIEGFCCARHFWTK---ICKPVLHQGEVCTKL-RKKGSHGLEIFQRCDCAKGLS 234

Qy         67 C 67
              |
Db        235 C 235


RESULT 28
DKK2_MOUSE
ID   DKK2_MOUSE     STANDARD;      PRT;   259 AA.
AC   Q9QYZ8;
DT   16-OCT-2001 (Rel. 40, Created)
DT   16-OCT-2001 (Rel. 40, Last sequence update)
DT   05-JUL-2004 (Rel. 44, Last annotation update)
DE   Dickkopf related protein-2 precursor (Dkk-2) (Dickkopf-2) (mDkk-2).
GN   Name=Dkk2;
OS   Mus musculus (Mouse).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX   NCBI_TaxID=10090;
RN   [1]
RP   SEQUENCE FROM N.A.
RX   MEDLINE=99425169; PubMed=10495270; DOI=10.1016/S0925-4773(99)00138-0;
RA   Monaghan P.A., Kioschis P., Wu W., Zuniga A., Bock D., Poustka A.,
RA   Delius H., Niehrs C.;
RT   "Dickkopf genes are co-ordinately expressed in mesodermal lineages.";
RL   Mech. Dev. 87:45-56(1999).
CC   -!- FUNCTION: Inhibitor of Wnt signaling pathway (Potential).
CC   -!- SUBCELLULAR LOCATION: Secreted.
CC   -!- PTM: May be proteolytically processed by a furin-like protease.
CC   -!- SIMILARITY: Belongs to the dickkopf family.
CC   ---------------------------------------------------------------------------
CC   This SWISS-PROT entry is copyright. It is produced through a collaboration
CC   between the Swiss Institute of Bioinformatics and the EMBL outstation -
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CC   entities requires a license agreement (See http://www.isb-sib.ch/announce/
CC   or send an email to license@isb-sib.ch).
CC   ---------------------------------------------------------------------------
DR   EMBL; AJ243963; CAB60110.1; -.
DR   MGD; MGI:1890663; Dkk2.
DR   InterPro; IPR006796; dickkopf_N.
DR   Pfam; PF04706; Dickkopf_N; 1.
KW   Developmental protein; Glycoprotein; Signal; Wnt signaling pathway.
FT   SIGNAL        1     33       Potential.
FT   CHAIN        34    259       Dickkopf related protein-2.
FT   DOMAIN       78    127       DKK-type Cys-1.
FT   DOMAIN      183    256       DKK-type Cys-2.
FT   CARBOHYD     52     52       N-linked (GlcNAc. . .) (Potential).
SQ   SEQUENCE   259 AA;  28416 MW;  EAAB76F2D2C9780D CRC64;

  Query Match             21.3%;  Score 98;  DB 1;  Length 259;
  Best Local Similarity   36.1%;  Pred. No. 0.0077;
  Matches   22;  Conservative    5;  Mismatches   30;  Indels    4;  Gaps    2;

Qy          7 CDKDSQCGGGMCCAVSIWVKSIRICTPMGKLGDSCHPLTRKVPFFGRRMHHTCPCLPGLA 66
              | : | |  | |||   | |   || |:   |: |   ||    |  :   | |  ||:
Db        183 CLRSSDCIDGFCCARHFWTK---ICKPVLHQGEVC-TKQRKKGSHGLEIFQRCDCAKGLS 238

Qy         67 C 67
              |
Db        239 C 239


RESULT 29
Q8BFW0
ID   Q8BFW0      PRELIMINARY;      PRT;   259 AA.
AC   Q8BFW0;
DT   01-MAR-2003 (TrEMBLrel. 23, Created)
DT   01-MAR-2003 (TrEMBLrel. 23, Last sequence update)
DT   05-JUL-2004 (TrEMBLrel. 27, Last annotation update)
DE   Mus musculus 10, 11 days embryo whole body cDNA, RIKEN full-length
DE   enriched library, clone:2810421D01 product:DICKKOPF RELATED PROTEIN-2
DE   (DKK-2) (DICKKOPF-2) (MDKK-2) homolog (Mus musculus 11 days embryo
DE   head cDNA, RIKEN full-length enriched library, clone:6230401K18
DE   product:DICKKOPF RELATED PROTEIN-2 (DKK-2) (DICKKOPF-2) (MDKK-2)
DE   homolog).
GN   Name=Dkk2;
OS   Mus musculus (Mouse).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX   NCBI_TaxID=10090;
RN   [1]
RP   SEQUENCE FROM N.A.
RC   STRAIN=C57BL/6J; TISSUE=Head, and Whole body;
RX   MEDLINE=99279253; PubMed=10349636; DOI=10.1016/S0076-6879(99)03004-9;
RA   Carninci P., Hayashizaki Y.;
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```
RT   "High-efficiency full-length cDNA cloning.";
RL   Meth. Enzymol. 303:19-44(1999).
RN   [2]
RP   SEQUENCE FROM N.A.
RC   STRAIN=C57BL/6J; TISSUE=Head, and Whole body;
RX   MEDLINE=21085660; PubMed=11217851; DOI=10.1038/35055500;
RA   RIKEN FANTOM Consortium;
RT   "Functional annotation of a full-length mouse cDNA collection.";
RL   Nature 409:685-690(2001).
RN   [3]
RP   SEQUENCE FROM N.A.
RC   STRAIN=C57BL/6J; TISSUE=Head, and Whole body;
RA   The FANTOM Consortium,
RA   the RIKEN Genome Exploration Research Group Phase I & II Team;
RT   "Analysis of the mouse transcriptome based on functional annotation of
RT   60,770 full-length cDNAs.";
RL   Nature 420:563-573(2002).
RN   [4]
RP   SEQUENCE FROM N.A.
RC   STRAIN=C57BL/6J; TISSUE=Head, and Whole body;
RX   MEDLINE=20499374; PubMed=11042159; DOI=10.1101/gr.145100;
RA   Carninci P., Shibata Y., Hayatsu N., Sugahara Y., Shibata K., Itoh M.,
RA   Konno H., Okazaki Y., Muramatsu M., Hayashizaki Y.;
RT   "Normalization and subtraction of cap-trapper-selected cDNAs to
RT   prepare full-length cDNA libraries for rapid discovery of new genes.";
RL   Genome Res. 10:1617-1630(2000).
RN   [5]
RP   SEQUENCE FROM N.A.
RC   STRAIN=C57BL/6J; TISSUE=Head, and Whole body;
RX   MEDLINE=20530913; PubMed=11076861; DOI=10.1101/gr.152600;
RA   Shibata K., Itoh M., Aizawa K., Nagaoka S., Sasaki N., Carninci P.,
RA   Konno H., Akiyama J., Nishi K., Kitsunai T., Tashiro H., Itoh M.,
RA   Sumi N., Ishii Y., Nakamura S., Hazama M., Nishine T., Harada A.,
RA   Yamamoto R., Matsumoto H., Sakaguchi S., Ikegami T., Kashiwagi K.,
RA   Fujiwake S., Inoue K., Togawa Y., Izawa M., Ohara E., Watahiki M.,
RA   Yoneda Y., Ishikawa T., Ozawa K., Tanaka T., Matsuura S., Kawai J.,
RA   Okazaki Y., Muramatsu M., Inoue Y., Kira A., Hayashizaki Y.;
RT   "RIKEN integrated sequence analysis (RISA) system-384-format
RT   sequencing pipeline with 384 multicapillary sequencer.";
RL   Genome Res. 10:1757-1771(2000).
RN   [6]
RP   SEQUENCE FROM N.A.
RC   STRAIN=C57BL/6J; TISSUE=Head, and Whole body;
RA   Adachi J., Aizawa K., Akimura T., Arakawa T., Bono H., Carninci P.,
RA   Fukuda S., Furuno M., Hanagaki T., Hara A., Hashizume W.,
RA   Hayashida K., Hayatsu N., Hiramoto K., Hiraoka T., Hirozane T.,
RA   Hori F., Imotani K., Ishii Y., Itoh M., Kagawa I., Kasukawa T.,
RA   Katoh H., Kawai J., Kojima Y., Kondo S., Konno H., Kouda M., Koya S.,
RA   Kurihara C., Matsuyama T., Miyazaki A., Murata M., Nakamura M.,
RA   Nishi K., Nomura K., Numazaki R., Ohno M., Ohsato N., Okazaki Y.,
RA   Saito R., Saitoh H., Sakai C., Sakai K., Sakazume N., Sano H.,
RA   Sasaki D., Shibata K., Shinagawa A., Shiraki T., Sogabe Y., Tagami M.,
RA   Tagawa A., Takahashi F., Takaku-Akahira S., Takeda Y., Tanaka T.,
RA   Tomaru A., Toya T., Yasunishi A., Muramatsu M., Hayashizaki Y.;
RL   Submitted (JUL-2001) to the EMBL/GenBank/DDBJ databases.
DR   EMBL; AK028225; BAC25824.1; -.
DR   EMBL; AK031749; BAC27536.1; -.
DR   MGD; MGI:1890663; Dkk2.
DR   GO; GO:0005615; C:extracellular space; TAS.
DR   InterPro; IPR006796; dickkopf_N.
DR   InterPro; IPR011052; Prot_amyl_inhib.
DR   Pfam; PF04706; Dickkopf_N; 1.
SQ   SEQUENCE   259 AA;  28432 MW;  E649ED8E3BC7E8E4 CRC64;

  Query Match            21.3%;  Score 98;  DB 2;  Length 259;
  Best Local Similarity   36.1%;  Pred. No. 0.0077;
  Matches   22;  Conservative    5;  Mismatches   30;  Indels    4;  Gaps    2;

Qy          7 CDKDSQCGGGMCCAVSIWVKSIRICTPMGKLGDSCHPLTRKVPFFGRRMHHTCPCLPGLA 66
              | : | |  | |||   | |   || |:   |: |    ||    |  :   | |  ||:
Db        183 CLRSSDCIDGFCCARHFWTK---ICKPVLHQGEVC-TKQRKKGSHGLEIFQRCDCAKGLS 238

Qy         67 C 67
              |
Db        239 C 239


RESULT 30
Q6PVU5
ID   Q6PVU5      PRELIMINARY;      PRT;   268 AA.
AC   Q6PVU5;
DT   05-JUL-2004 (TrEMBLrel. 27, Created)
DT   05-JUL-2004 (TrEMBLrel. 27, Last sequence update)
DT   05-JUL-2004 (TrEMBLrel. 27, Last annotation update)
DE   Dickkopf1 precursor.
GN   Name=Dkk1;
OS   Oryctolagus cuniculus (Rabbit).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Lagomorpha; Leporidae; Oryctolagus.
OX   NCBI_TaxID=9986;
RN   [1]
RP   SEQUENCE FROM N.A.
RA   Weisheit G., Viebahn C.;
RL   Submitted (MAR-2004) to the EMBL/GenBank/DDBJ databases.
DR   EMBL; AY575211; AAS91587.1; -.
DR   GO; GO:0005576; C:extracellular; IEA.
DR   GO; GO:0007275; P:development; IEA.
DR   GO; GO:0030178; P:negative regulation of Wnt receptor signali. . .; IEA.
DR   InterPro; IPR006796; dickkopf_N.
DR   Pfam; PF04706; Dickkopf_N; 1.
KW   Signal.
FT   SIGNAL        1     30       Potential.
SQ   SEQUENCE   268 AA;  28951 MW;  77044F6D92C4014A CRC64;

  Query Match            21.3%;  Score 98;  DB 2;  Length 268;
  Best Local Similarity   37.7%;  Pred. No. 0.0079;
  Matches   23;  Conservative    5;  Mismatches   29;  Indels    4;  Gaps    2;

Qy          7 CDKDSQCGGGMCCAVSIWVKSIRICTPMGKLGDSCHPLTRKVPFFGRRMHHTCPCLPGLA 66
              | : | |  |:|||   | |   || |: | |  |    ||    |  :   | |  ||:
Db        191 CLRSSDCATGLCCARHFWSK---ICKPVLKEGQVCTKHRRK-GSHGLEIFQRCYCGDGLS 246

Qy         67 C 67
              |
Db        247 C 247


RESULT 31
DKK2_HUMAN
ID   DKK2_HUMAN     STANDARD;      PRT;   259 AA.
AC   Q9UBU2; Q9UIU3;
DT   16-OCT-2001 (Rel. 40, Created)
DT   16-OCT-2001 (Rel. 40, Last sequence update)
DT   05-JUL-2004 (Rel. 44, Last annotation update)
DE   Dickkopf related protein-2 precursor (Dkk-2) (Dickkopf-2) (hDkk-2)
DE   (UNQ682/PRO1316).
GN   Name=DKK2;
OS   Homo sapiens (Human).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX   NCBI_TaxID=9606;
RN   [1]
RP   SEQUENCE FROM N.A.
RC   TISSUE=Fetal lung;
RX   MEDLINE=20035735; PubMed=10570958; DOI=10.1016/S0378-1119(99)00365-0;
RA   Krupnik V.E., Sharp J.D., Jiang C., Robison K., Chickering T.W.,
RA   Amaravadi L., Brown D.E., Guyot D., Mays G., Leiby K., Chang B.,
RA   Duong T., Goodearl A.D.J., Gearing D.P., Sokol S.Y., McCarthy S.A.;
RT   "Functional and structural diversity of the human Dickkopf gene
RT   family.";
RL   Gene 238:301-313(1999).
RN   [2]
RP   SEQUENCE FROM N.A.
RA   Tanaka S., Sugimachi K., Sugimachi K.;
RL   Submitted (OCT-1999) to the EMBL/GenBank/DDBJ databases.
RN   [3]
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RP   SEQUENCE FROM N.A.
RX   MEDLINE=22887296; PubMed=12975309; DOI=10.1101/gr.1293003;
RA   Clark H.F., Gurney A.L., Abaya E., Baker K., Baldwin D., Brush J.,
RA   Chen J., Chow B., Chui C., Crowley C., Currell B., Deuel B., Dowd P.,
RA   Eaton D., Foster J., Grimaldi C., Gu Q., Hass P.E., Heldens S.,
RA   Huang A., Kim H.S., Klimowski L., Jin Y., Johnson S., Lee J.,
RA   Lewis L., Liao D., Mark M., Robbie E., Sanchez C., Schoenfeld J.,
RA   Seshagiri S., Simmons L., Singh J., Smith V., Stinson J., Vagts A.,
RA   Vandlen R., Watanabe C., Wieand D., Woods K., Xie M.-H., Yansura D.,
RA   Yi S., Yu G., Yuan J., Zhang M., Zhang Z., Goddard A., Wood W.I.,
RA   Godowski P., Gray A.;
RT   "The secreted protein discovery initiative (SPDI), a large-scale
RT   effort to identify novel human secreted and transmembrane proteins: a
RT   bioinformatics assessment.";
RL   Genome Res. 13:2265-2270(2003).
RN   [4]
RP   SEQUENCE OF 75-259 FROM N.A.
RA   Tate G., Suzuki T., Mitsuya T.;
RL   Submitted (NOV-1999) to the EMBL/GenBank/DDBJ databases.
CC   -!- FUNCTION: Inhibitor of Wnt signaling pathway (Potential).
CC   -!- SUBCELLULAR LOCATION: Secreted.
CC   -!- TISSUE SPECIFICITY: Expressed in heart, brain, skeletal muscle and
CC       lung.
CC   -!- PTM: May be proteolytically processed by a furin-like protease.
CC   -!- SIMILARITY: Belongs to the dickkopf family.
CC   ---------------------------------------------------------------------
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CC   entities requires a license agreement (See http://www.isb-sib.ch/announce/
CC   or send an email to license@isb-sib.ch).
CC   ---------------------------------------------------------------------
DR   EMBL; AF177395; AAF02675.1; -.
DR   EMBL; AB033208; BAA85465.1; -.
DR   EMBL; AY358414; AAQ88780.1; -.
DR   EMBL; AB035181; BAA87056.1; -.
DR   EMBL; AB035180; BAA87056.1; JOINED.
DR   Genew; HGNC:2892; DKK2.
DR   MIM; 605415; -.
DR   GO; GO:0005615; C:extracellular space; TAS.
DR   InterPro; IPR006796; dickkopf_N.
DR   Pfam; PF04706; Dickkopf_N; 1.
KW   Developmental protein; Glycoprotein; Signal; Wnt signaling pathway.
FT   SIGNAL       1     33       Potential.
FT   CHAIN       34    259       Dickkopf related protein-2.
FT   DOMAIN      78    127       DKK-type Cys-1.
FT   DOMAIN     183    256       DKK-type Cys-2.
FT   CARBOHYD    52     52       N-linked (GlcNAc. . .) (Potential).
SQ   SEQUENCE   259 AA;  28447 MW;  39DDA3FA8975E87F CRC64;

  Query Match             21.0%;  Score 97;  DB 1;  Length 259;
  Best Local Similarity   36.1%;  Pred. No. 0.0099;
  Matches   22;  Conservative    5;  Mismatches   30;  Indels    4;  Gaps    2;

Qy          7 CDKDSQCGGGMCCAVSIWVKSIRICTPMGKLGDSCHPLTRKVPFFGRRMHHTCPCLPGLA 66
              | : | |  | |||   | |   || |:   |: |    ||    |  :   | |  ||:
Db        183 CLRSSDCIEGFCCARHFWTK---ICKPVLHQGEVC-TKQRKKGSHGLEIFQRCDCAKGLS 238

Qy         67 C 67
              |
Db        239 C 239


RESULT 32
O43532
ID   O43532      PRELIMINARY;      PRT;   171 AA.
AC   O43532;
DT   01-JUN-1998 (TrEMBLrel. 06, Created)
DT   01-JUN-1998 (TrEMBLrel. 06, Last sequence update)
DT   01-MAR-2004 (TrEMBLrel. 26, Last annotation update)
DE   RIG-like 7-1.
OS   Homo sapiens (Human).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX   NCBI_TaxID=9606;
RN   [1]
RP   SEQUENCE FROM N.A.
RC   TISSUE=Brain;
RA   Ligon A.H., Pershouse M.A., Jasser S., Hong Y.K., Yung W.K.A.,
RA   Steck P.A.;
RL   Submitted (NOV-1997) to the EMBL/GenBank/DDBJ databases.
DR   EMBL; AF034208; AAB92664.1; -.
DR   GO; GO:0005576; C:extracellular; IEA.
DR   GO; GO:0007275; P:development; IEA.
DR   GO; GO:0030178; P:negative regulation of Wnt receptor signali. . .; IEA.
DR   InterPro; IPR006796; dickkopf_N.
DR   InterPro; IPR011052; Prot_amyl_inhib.
DR   Pfam; PF04706; Dickkopf_N; 1.
SQ   SEQUENCE   171 AA;  19283 MW;  B890E38F873D0E62 CRC64;

  Query Match             20.6%;  Score 95;  DB 2;  Length 171;
  Best Local Similarity   29.5%;  Pred. No. 0.011;
  Matches   23;  Conservative   11;  Mismatches   36;  Indels    8;  Gaps    4;

Qy          7 CDKDSQCGGGMCCAVSIWVKSIRICTPMGKLGDSCH-PLTRKVPFFGRRMH-----HTCP 60
              ||    |  |:|||    :    :|||:   |: || | :| :      :         ||
Db         52 CDNQRDCQPGLCCAFQRGL-LFPVCTPLPVEGELCHDPASRLLDLITWELEPDGALDRCP 110

Qy         61 CLPGLACLRTSFNR-FIC 77
              |  || |   | :  ::|
Db        111 CXSGLLCQPHSHSLVYVC 128


RESULT 33
DKK3_HUMAN
ID   DKK3_HUMAN     STANDARD;      PRT;   350 AA.
AC   Q9UBP4; Q9ULB7;
DT   16-OCT-2001 (Rel. 40, Created)
DT   16-OCT-2001 (Rel. 40, Last sequence update)
DT   25-JAN-2005 (Rel. 46, Last annotation update)
DE   Dickkopf related protein-3 precursor (Dkk-3) (Dickkopf-3) (hDkk-3)
DE   (UNQ258/PRO295).
GN   Name=DKK3; Synonyms=REIC;
OS   Homo sapiens (Human).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX   NCBI_TaxID=9606;
RN   [1]
RP   SEQUENCE FROM N.A.
RC   TISSUE=Fetal brain;
RX   MEDLINE=20035735; PubMed=10570958; DOI=10.1016/S0378-1119(99)00365-0;
RA   Krupnik V.E., Sharp J.D., Jiang C., Robison K., Chickering T.W.,
RA   Amaravadi L., Brown D.E., Guyot D., Mays G., Leiby K., Chang B.,
RA   Duong T., Goodearl A.D.J., Gearing D.P., Sokol S.Y., McCarthy S.A.;
RT   "Functional and structural diversity of the human Dickkopf gene
RT   family.";
RL   Gene 238:301-313(1999).
RN   [2]
RP   SEQUENCE FROM N.A.
RA   Tanaka S., Sugimachi K., Sugimachi K.;
RL   Submitted (OCT-1999) to the EMBL/GenBank/DDBJ databases.
RN   [3]
RP   SEQUENCE FROM N.A.
RX   MEDLINE=20119095; PubMed=10652205; DOI=10.1006/bbrc.1999.2067;
RA   Tsuji T., Miyazaki M., Sakaguchi M., Inoue Y., Namba M.;
RT   "A REIC gene shows down-regulation in human immortalized cells and
RT   human tumor-derived cell lines.";
RL   Biochem. Biophys. Res. Commun. 268:20-24(2000).
RN   [4]
RP   SEQUENCE FROM N.A.
RA   Tate G., Mitsuya T.;
RL   Submitted (NOV-1999) to the EMBL/GenBank/DDBJ databases.
RN   [5]
RP   SEQUENCE FROM N.A.
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RX   MEDLINE=21673998; PubMed=11814687; DOI=10.1016/S0378-1119(01)00838-1;
RA   Kobayashi K., Ouchida M., Tsuji T., Hanafusa H., Miyazaki M.,
RA   Namba M., Shimizu N., Shimizu K.;
RT   "Reduced expression of the REIC/Dkk-3 gene by promoter-
RT   hypermethylation in human tumor cells.";
RL   Gene 282:151-158(2002).
RN   [6]
RP   SEQUENCE FROM N.A.
RX   MEDLINE=22887296; PubMed=12975309; DOI=10.1101/gr.1293003;
RA   Clark H.F., Gurney A.L., Abaya E., Baker K., Baldwin D., Brush J.,
RA   Chen J., Chow B., Chui C., Crowley C., Currell B., Deuel B., Dowd P.,
RA   Eaton D., Foster J., Grimaldi C., Gu Q., Hass P.E., Heldens S.,
RA   Huang A., Kim H.S., Klimowski L., Jin Y., Johnson S., Lee J.,
RA   Lewis L., Liao D., Mark M., Robbie E., Sanchez C., Schoenfeld J.,
RA   Seshagiri S., Simmons L., Singh J., Smith V., Stinson J., Vagts A.,
RA   Vandlen R., Watanabe C., Wieand D., Woods K., Xie M.-H., Yansura D.,
RA   Yi S., Yu G., Yuan J., Zhang M., Zhang Z., Goddard A., Wood W.I.,
RA   Godowski P., Gray A.;
RT   "The secreted protein discovery initiative (SPDI), a large-scale
RT   effort to identify novel human secreted and transmembrane proteins: a
RT   bioinformatics assessment.";
RL   Genome Res. 13:2265-2270(2003).
RN   [7]
RP   SEQUENCE FROM N.A.
RC   TISSUE=Kidney;
RX   MEDLINE=22388257; PubMed=12477932; DOI=10.1073/pnas.242603899;
RA   Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,
RA   Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,
RA   Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
RA   Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
RA   Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
RA   Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,
RA   Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,
RA   Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,
RA   Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,
RA   Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
RA   Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
RA   Fahey J., Helton E., Ketteman M., Madan A., Rodrigues S., Sanchez A.,
RA   Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,
RA   Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,
RA   Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,
RA   Butterfield Y.S.N., Krzywinski M.I., Skalska U., Smailus D.E.,
RA   Schnerch A., Schein J.E., Jones S.J.M., Marra M.A.;
RT   "Generation and initial analysis of more than 15,000 full-length human
RT   and mouse cDNA sequences.";
RL   Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).
RN   [8]
RP   SEQUENCE OF 22-36.
RX   PubMed=15340161; DOI=10.1110/ps.04682504;
RA   Zhang Z., Henzel W.J.;
RT   "Signal peptide prediction based on analysis of experimentally
RT   verified cleavage sites.";
RL   Protein Sci. 13:2819-2824(2004).
CC   -!- FUNCTION: Inhibitor of Wnt signaling pathway (Potential).
CC   -!- SUBCELLULAR LOCATION: Secreted.
CC   -!- TISSUE SPECIFICITY: Highest expression in heart, brain, and spinal
CC       cord.
CC   -!- PTM: N-glycosylated.
CC   -!- SIMILARITY: Belongs to the dickkopf family.
CC   ---------------------------------------------------------------------
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CC   or send an email to license@isb-sib.ch).
CC   ---------------------------------------------------------------------
DR   EMBL; AF177396; AAF02676.1; -.
DR   EMBL; AB033421; BAA85488.1; -.
DR   EMBL; AB034203; BAA90548.1; -.
DR   EMBL; AB035182; BAA87044.2; -.
DR   EMBL; AB045205; BAA87044.2; JOINED.
DR   EMBL; AB045206; BAA87044.2; JOINED.
DR   EMBL; AB045207; BAA87044.2; JOINED.
DR   EMBL; AB045208; BAA87044.2; JOINED.
DR   EMBL; AB045209; BAA87044.2; JOINED.
DR   EMBL; AB045210; BAA87044.2; JOINED.
DR   EMBL; AB057591; BAB84360.1; -.
DR   EMBL; AB057804; BAB84361.1; -.
DR   EMBL; AY358378; AAQ88744.1; -.
DR   EMBL; BC007660; AAH07660.1; -.
DR   Genew; HGNC:2893; DKK3.
DR   H-InvDB; HIX0009450; -.
DR   MIM; 605416; -.
DR   GO; GO:0005615; C:extracellular space; TAS.
DR   GO; GO:0009653; P:morphogenesis; TAS.
DR   InterPro; IPR006796; dickkopf_N.
DR   InterPro; IPR011052; Prot_amyl_inhib.
DR   Pfam; PF04706; Dickkopf_N; 1.
KW   Developmental protein; Direct protein sequencing; Glycoprotein;
KW   Signal; Wnt signaling pathway.
FT   SIGNAL       1     21
FT   CHAIN       22    350       Dickkopf related protein-3.
FT   DOMAIN     147    195       DKK-type Cys-1.
FT   DOMAIN     208    284       DKK-type Cys-2.
FT   DOMAIN     338    343       Poly-Ala.
FT   CARBOHYD    96     96       N-linked (GlcNAc. . .) (Potential).
FT   CARBOHYD   106    106       N-linked (GlcNAc. . .) (Potential).
FT   CARBOHYD   121    121       N-linked (GlcNAc. . .) (Potential).
FT   CARBOHYD   204    204       N-linked (GlcNAc. . .) (Potential).
FT   CONFLICT   335    335       G -> R (in Ref. 4).
SQ   SEQUENCE   350 AA;  38291 MW;  72F504122B40AFFE CRC64;

  Query Match             20.6%;  Score 95;  DB 1;  Length 350;
  Best Local Similarity   29.5%;  Pred. No. 0.022;
  Matches   23;  Conservative   11;  Mismatches   36;  Indels    8;  Gaps    4;

Qy          7 CDKDSQCGGGMCCAVSIWVKSIRICTPMGKLGDSCH-PLTRKVPFFGRRMH-----HTCP 60
              ||    |  |:|||    :    :|||:   |: || | :| :      :        ||
Db        208 CDNQRDCQPGLCCAFQRGL-LFPVCTPLPVEGELCHDPASRLLDLITWELEPDGALDRCP 266

Qy         61 CLPGLACLRTSFNR-FIC 77
              |  || |   | :  ::|
Db        267 CASGLLCQPHSHSLVYVC 284


RESULT 34
Q8N294
ID   Q8N294      PRELIMINARY;      PRT;   215 AA.
AC   Q8N294;
DT   01-OCT-2002 (TrEMBLrel. 22, Created)
DT   01-OCT-2002 (TrEMBLrel. 22, Last sequence update)
DT   01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
DE   Hypothetical protein FLJ33633.
OS   Homo sapiens (Human).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX   NCBI_TaxID=9606;
RN   [1]
RP   SEQUENCE FROM N.A.
RC   TISSUE=Amygdala;
RX   PubMed=14702039; DOI=10.1038/ng1285;
RA   Ota T., Suzuki Y., Nishikawa T., Otsuki T., Sugiyama T., Irie R.,
RA   Wakamatsu A., Hayashi K., Sato H., Nagai K., Kimura K., Makita H.,
RA   Sekine M., Obayashi M., Nishi T., Shibahara T., Tanaka T., Ishii S.,
RA   Yamamoto J., Saito K., Kawai Y., Isono Y., Nakamura Y., Nagahari K.,
RA   Murakami K., Yasuda T., Iwayanagi T., Wagatsuma M., Shiratori A.,
RA   Sudo H., Hosoiri T., Kaku Y., Kodaira H., Kondo H., Sugawara M.,
RA   Takahashi M., Kanda K., Yokoi T., Furuya T., Kikkawa E., Omura Y.,
RA   Abe K., Kamihara K., Katsuta N., Sato K., Tanikawa M., Yamazaki M.,
RA   Ninomiya K., Ishibashi T., Yamashita H., Murakawa K., Fujimori K.,
RA   Tanai H., Kimata M., Watanabe M., Hiraoka S., Chiba Y., Ishida S.,
RA   Ono Y., Takiguchi S., Watanabe S., Yosida M., Hotuta T., Kusano J.,
RA   Kanehori K., Takahashi-Fujii A., Hara H., Tanase T., Nomura Y.,
RA   Togiya S., Komai F., Hara R., Takeuchi K., Arita M., Imose N.,
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RA   Musashino K., Yuuki H., Oshima A., Sasaki N., Aotsuka S.,
RA   Yoshikawa Y., Matsunawa H., Ichihara T., Shiohata N., Sano S.,
RA   Moriya S., Momiyama H., Satoh N., Takami S., Terashima Y., Suzuki O.,
RA   Nakagawa S., Senoh A., Mizoguchi H., Goto Y., Shimizu F., Wakebe H.,
RA   Hishigaki H., Watanabe T., Sugiyama A., Takemoto M., Kawakami B.,
RA   Yamazaki M., Watanabe K., Kumagai A., Itakura S., Fukuzumi Y.,
RA   Fujimori Y., Komiyama M., Tashiro H., Tanigami A., Fujiwara T.,
RA   Ono T., Yamada K., Fujii Y., Ozaki K., Hirao M., Ohmori Y.,
RA   Kawabata A., Hikiji T., Kobatake N., Inagaki H., Ikema Y., Okamoto S.,
RA   Okitani R., Kawakami T., Noguchi S., Itoh T., Shigeta K., Senba T.,
RA   Matsumura K., Nakajima Y., Mizuno T., Morinaga M., Sasaki M.,
RA   Togashi T., Oyama M., Hata H., Watanabe M., Komatsu T.,
RA   Mizushima-Sugano J., Satoh T., Shirai Y., Takahashi Y., Nakagawa K.,
RA   Okumura K., Nagase T., Nomura N., Kikuchi H., Masuho Y., Yamashita R.,
RA   Nakai K., Yada T., Nakamura Y., Ohara O., Isogai T., Sugano S.;
RT   "Complete sequencing and characterization of 21,243 full-length human
RT   cDNAs.";
RL   Nat. Genet. 36:40-45(2004).
DR   EMBL; AK090952; BAC03555.1; -.
DR   GO; GO:0005576; C:extracellular; IEA.
DR   GO; GO:0007275; P:development; IEA.
DR   GO; GO:0030178; P:negative regulation of Wnt receptor signali. . .; IEA.
DR   InterPro; IPR006796; dickkopf_N.
DR   Pfam; PF04706; Dickkopf_N; 1.
SQ   SEQUENCE   215 AA;  23904 MW;  2D9DEABCAFAE80B0 CRC64;

  Query Match             20.5%;  Score 94.5;  DB 2;  Length 215;
  Best Local Similarity   31.3%;  Pred. No. 0.016;
  Matches   21;  Conservative    8;  Mismatches   31;  Indels    7;  Gaps    3;

Qy          7 CDKDSQCGGGMCCAVSIWVKSIRICTPMGKLGDSCH-PLTRKVPFFGRRMH-----HTCP 60
              ||     |  |:|||    :    :|||:   |: || | :| :      :         ||
Db         11 CDNQRDCQPGLCCAFQRGL-LFPVCTPLPVEGELCHDPASRLLDLITWELEPDGALDRCP 69

Qy         61 CLPGLAC 67
              |  || |
Db         70 CASGLLC 76


RESULT 35
DKK3_CHICK
ID   DKK3_CHICK     STANDARD;      PRT;   350 AA.
AC   Q90839;
DT   01-NOV-1997 (Rel. 35, Created)
DT   01-NOV-1997 (Rel. 35, Last sequence update)
DT   05-JUL-2004 (Rel. 44, Last annotation update)
DE   Dickkopf related protein-3 precursor (Dkk-3) (Dickkopf-3) (Lens fiber
DE   protein CLFEST4).
GN   Name=DKK3;
OS   Gallus gallus (Chicken).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Archosauria; Aves; Neognathae; Galliformes; Phasianidae; Phasianinae;
OC   Gallus.
OX   NCBI_TaxID=9031;
RN   [1]
RP   SEQUENCE FROM N.A.
RC   TISSUE=Lens fibers;
RX   MEDLINE=96437509; PubMed=8840185;
RA   Sawada K., Agata K., Eguchi G.;
RT   "Characterization of terminally differentiated cell state by
RT   categorizing cDNA clones derived from chicken lens fibers.";
RL   Int. J. Dev. Biol. 40:531-535(1996).
CC   -!- FUNCTION: Inhibitor of Wnt signaling pathway (By similarity).
CC   -!- SUBCELLULAR LOCATION: Secreted (Potential).
CC   -!- TISSUE SPECIFICITY: Expressed in eye lens.
CC   -!- SIMILARITY: Belongs to the dickkopf family.
CC   ---------------------------------------------------------------------
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CC   or send an email to license@isb-sib.ch).
CC   ---------------------------------------------------------------------
DR   EMBL; D26311; BAA05373.1; -.
DR   HSSP; P25687; 1IMT.
DR   InterPro; IPR006796; dickkopf_N.
DR   Pfam; PF04706; Dickkopf_N; 1.
KW   Developmental protein; Glycoprotein; Signal; Wnt signaling pathway.
FT   SIGNAL        1     29       Potential.
FT   CHAIN        30    350       Dickkopf related protein-3.
FT   DOMAIN      139    187       DKK-type Cys-1.
FT   DOMAIN      200    277       DKK-type Cys-2.
FT   CARBOHYD     88     88       N-linked (GlcNAc. . .) (Potential).
FT   CARBOHYD     98     98       N-linked (GlcNAc. . .) (Potential).
FT   CARBOHYD    113    113       N-linked (GlcNAc. . .) (Potential).
FT   CARBOHYD    196    196       N-linked (GlcNAc. . .) (Potential).
FT   CARBOHYD    282    282       N-linked (GlcNAc. . .) (Potential).
SQ   SEQUENCE   350 AA;  39208 MW;  57BE7ED850089DAE CRC64;

  Query Match             20.1%;  Score 92.5;  DB 1;  Length 350;
  Best Local Similarity   30.4%;  Pred. No. 0.041;
  Matches   21;  Conservative    9;  Mismatches   28;  Indels   11;  Gaps    4;

Qy          7 CDKDSQCGGGMCCAVSIWVKSI--RICTPMGKLGDSCH-PLTRKVPFFGRRMH-----HT 58
              |:     |  | |||    : | :   :|||: : |: || |  | :       :
Db        200 CENQHDCNPGTCCA---FQKELLFPVCTPLPEEGEPCHDPSNRLLNLITWELEPDGVLER 256

Qy         59 CPCLPGLAC 67
              ||| || |
Db        257 CPCASGLIC 265


RESULT 36
Q9W6D9
ID   Q9W6D9      PRELIMINARY;      PRT;   241 AA.
AC   Q9W6D9;
DT   01-NOV-1999 (TrEMBLrel. 12, Created)
DT   01-NOV-1999 (TrEMBLrel. 12, Last sequence update)
DT   01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
DE   Dickkopf-1.
GN   Name=dkk1;
OS   Brachydanio rerio (Zebrafish) (Danio rerio).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Actinopterygii; Neopterygii; Teleostei; Ostariophysi; Cypriniformes;
OC   Cyprinidae; Danio.
OX   NCBI_TaxID=7955;
RN   [1]
RP   SEQUENCE FROM N.A.
RX   MEDLINE=20500887; PubMed=11044603; DOI=10.1016/S0925-4773(00)00433-0;
RA   Shinya M., Eschbach C., Clark M., Lehrach H., Furutani-Seiki M.;
RT   "Zebrafish Dkk1, induced by the pre-MBT Wnt signaling, is secreted
RT   from the prechordal plate and patterns the anterior neural plate.";
RL   Mech. Dev. 98:3-17(2000).
DR   EMBL; AF116852; AAD22461.1; -.
DR   ZFIN; ZDB-GENE-990708-5; dkk1.
DR   GO; GO:0005576; C:extracellular; IEA.
DR   GO; GO:0007275; P:development; IEA.
DR   GO; GO:0030178; P:negative regulation of Wnt receptor signali. . .; IEA.
DR   InterPro; IPR006796; dickkopf_N.
DR   Pfam; PF04706; Dickkopf_N; 1.
SQ   SEQUENCE   241 AA;  26139 MW;  5C53DBD62F3EE00C CRC64;

  Query Match             20.0%;  Score 92;  DB 2;  Length 241;
  Best Local Similarity   36.1%;  Pred. No. 0.033;
  Matches   22;  Conservative    5;  Mismatches   30;  Indels    4;  Gaps    2;

Qy          7 CDKDSQCGGGMCCAVSIWVKSIRICTPMGKLGDSCHPLTRKVPFFGRRMHHTCPCLPGLA 66
              | : | |   :|||   | |   || |: | |  |    ||    |  :   | |  ||:
Db        165 CLRSSDCAETLCCARHFWSK---ICKPVLKEGQVCTKHKRK-GTHGLEIFQRCDCGEGLS 220

Qy         67 C 67
              |
Db        221 C 221
```

```
RESULT 37
Q9ES33
ID   Q9ES33      PRELIMINARY;      PRT;   277 AA.
AC   Q9ES33;
DT   01-MAR-2001 (TrEMBLrel. 16, Created)
DT   01-MAR-2001 (TrEMBLrel. 16, Last sequence update)
DT   01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
DE   Substrate binding subunit of type II 5'-deiodinase D2p29.
OS   Rattus norvegicus (Rat).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
OX   NCBI_TaxID=10116;
RN   [1]
RP   SEQUENCE FROM N.A.
RC   STRAIN=Sprague-Dawley; TISSUE=Brain;
RX   MEDLINE=20400444; PubMed=10829019; DOI=10.1074/jbc.M002036200;
RA   Leonard D.M., Stachelek S.J., Safran M., Farwell A.P., Kowalik T.F.,
RA   Leonard J.L.;
RT   "Cloning, expression, and functional characterization of the substrate
RT   binding subunit of rat type II iodothyronine 5'-deiodinase.";
RL   J. Biol. Chem. 275:25194-25201(2000).
DR   EMBL; AF245040; AAG15890.1; -.
DR   GO; GO:0005576; C:extracellular; IEA.
DR   GO; GO:0007275; P:development; IEA.
DR   GO; GO:0030178; P:negative regulation of Wnt receptor signali. . .; IEA.
DR   InterPro; IPR006796; dickkopf_N.
DR   Pfam; PF04706; Dickkopf_N; 1.
SQ   SEQUENCE   277 AA;  30763 MW;  8025F66DFE4C205E CRC64;

  Query Match             19.8%;  Score 91.5;  DB 2;  Length 277;
  Best Local Similarity   29.9%;  Pred. No. 0.043;
  Matches   20;  Conservative    9;  Mismatches   31;  Indels    7;  Gaps    3;

Qy          7 CDKDSQCGGGMCCAVSIWVKSIRICTPMGKLGDSCH-PLTRKVPFFGRRMH-----HTCP 60
              ||    |  |:|||    :    :|||:   |: || | :: :     :        ||
Db        137 CDNQRDCQPGLCCAFQRGL-LFPVCTPLPVEGELCHDPTSQMLDLITWELEPEGALDRCP 195

Qy         61 CLPGLAC 67
              |  || |
Db        196 CASGLLC 202


RESULT 38
DKK3_MOUSE
ID   DKK3_MOUSE     STANDARD;      PRT;   349 AA.
AC   Q9QUN9;
DT   16-OCT-2001 (Rel. 40, Created)
DT   16-OCT-2001 (Rel. 40, Last sequence update)
DT   05-JUL-2004 (Rel. 44, Last annotation update)
DE   Dickkopf related protein-3 precursor (Dkk-3) (Dickkopf-3) (mDkk-3).
GN   Name=Dkk3;
OS   Mus musculus (Mouse).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX   NCBI_TaxID=10090;
RN   [1]
RP   SEQUENCE FROM N.A.
RX   MEDLINE=99425169; PubMed=10495270; DOI=10.1016/S0925-4773(99)00138-0;
RA   Monaghan P.A., Kioschis P., Wu W., Zuniga A., Bock D., Poustka A.,
RA   Delius H., Niehrs C.;
RT   "Dickkopf genes are co-ordinately expressed in mesodermal lineages.";
RL   Mech. Dev. 87:45-56(1999).
RN   [2]
RP   SEQUENCE FROM N.A.
RX   MEDLINE=20035735; PubMed=10570958; DOI=10.1016/S0378-1119(99)00365-0;
RA   Krupnik V.E., Sharp J.D., Jiang C., Robison K., Chickering T.W.,
RA   Amaravadi L., Brown D.E., Guyot D., Mays G., Leiby K., Chang B.,
RA   Duong T., Goodearl A.D.J., Gearing D.P., Sokol S.Y., McCarthy S.A.;
RT   "Functional and structural diversity of the human Dickkopf gene
RT   family.";
RL   Gene 238:301-313(1999).
RN   [3]
RP   SEQUENCE FROM N.A.
RC   STRAIN=C57BL/6J; TISSUE=Liver;
RX   MEDLINE=22354683; PubMed=12466851; DOI=10.1038/nature01266;
RA   Okazaki Y., Furuno M., Kasukawa T., Adachi J., Bono H., Kondo S.,
RA   Nikaido I., Osato N., Saito R., Suzuki H., Yamanaka I., Kiyosawa H.,
RA   Yagi K., Tomaru Y., Hasegawa Y., Nogami A., Schonbach C., Gojobori T.,
RA   Baldarelli R., Hill D.P., Bult C., Hume D.A., Quackenbush J.,
RA   Schriml L.M., Kanapin A., Matsuda H., Batalov S., Beisel K.W.,
RA   Blake J.A., Bradt D., Brusic V., Chothia C., Corbani L.E., Cousins S.,
RA   Dalla E., Dragani T.A., Fletcher C.F., Forrest A., Frazer K.S.,
RA   Gaasterland T., Gariboldi M., Gissi C., Godzik A., Gough J.,
RA   Grimmond S., Gustincich S., Hirokawa N., Jackson I.J., Jarvis E.D.,
RA   Kanai A., Kawaji H., Kawasawa Y., Kedzierski R.M., King B.L.,
RA   Konagaya A., Kurochkin I.V., Lee Y., Lenhard B., Lyons P.A.,
RA   Maglott D.R., Maltais L., Marchionni L., McKenzie L., Miki H.,
RA   Nagashima T., Numata K., Okido T., Pavan W.J., Pertea G., Pesole G.,
RA   Petrovsky N., Pillai R., Pontius J.U., Qi D., Ramachandran S.,
RA   Ravasi T., Reed J.C., Reed D.J., Reid J., Ring B.Z., Ringwald M.,
RA   Sandelin A., Schneider C., Semple C.A., Setou M., Shimada K.,
RA   Sultana R., Takenaka Y., Taylor M.S., Teasdale R.D., Tomita M.,
RA   Verardo R., Wagner L., Wahlestedt C., Wang Y., Watanabe Y., Wells C.,
RA   Wilming L.G., Wynshaw-Boris A., Yanagisawa M., Yang I., Yang L.,
RA   Yuan Z., Zavolan M., Zhu Y., Zimmer A., Carninci P., Hayatsu N.,
RA   Hirozane-Kishikawa T., Konno H., Nakamura M., Sakazume N., Sato K.,
RA   Shiraki T., Waki K., Kawai J., Aizawa K., Arakawa T., Fukuda S.,
RA   Hara A., Hashizume W., Imotani K., Ishii Y., Itoh M., Kagawa I.,
RA   Miyazaki A., Sakai K., Sasaki D., Shibata K., Shinagawa A.,
RA   Yasunishi A., Yoshino M., Waterston R., Lander E.S., Rogers J.,
RA   Birney E., Hayashizaki Y.;
RT   "Analysis of the mouse transcriptome based on functional annotation of
RT   60,770 full-length cDNAs.";
RL   Nature 420:563-573(2002).
RN   [4]
RP   SEQUENCE FROM N.A.
RC   STRAIN=C57BL/6; TISSUE=Brain, and Retina;
RX   MEDLINE=22388257; PubMed=12477932; DOI=10.1073/pnas.242603899;
RA   Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,
RA   Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,
RA   Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
RA   Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
RA   Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
RA   Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,
RA   Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,
RA   Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,
RA   Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,
RA   Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
RA   Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
RA   Fahey J., Helton E., Ketteman M., Madan A., Rodrigues S., Sanchez A.,
RA   Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,
RA   Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,
RA   Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,
RA   Butterfield Y.S.N., Krzywinski M.I., Skalska U., Smailus D.E.,
RA   Schnerch A., Schein J.E., Jones S.J.M., Marra M.A.;
RT   "Generation and initial analysis of more than 15,000 full-length human
RT   and mouse cDNA sequences.";
RL   Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).
CC   -!- FUNCTION: Inhibitor of Wnt signaling pathway (Potential).
CC   -!- SUBCELLULAR LOCATION: Secreted.
CC   -!- TISSUE SPECIFICITY: Highest expression in brain, eye and heart.
CC   -!- SIMILARITY: Belongs to the dickkopf family.
CC   ----------------------------------------------------------------------
CC   This SWISS-PROT entry is copyright. It is produced through a collaboration
CC   between the Swiss Institute of Bioinformatics and the EMBL outstation -
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CC   or send an email to license@isb-sib.ch).
CC   ----------------------------------------------------------------------
DR   EMBL; AJ243964; CAB60111.1; -.
DR   EMBL; AF177400; AAF02680.1; -.
DR   EMBL; AK004853; BAB23617.1; -.
DR   EMBL; BC046304; AAH46304.1; -.
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DR   EMBL; BC050934; AAH50934.1; -.
DR   MGD; MGI:1354952; Dkk3.
DR   InterPro; IPR006796; dickkopf_N.
DR   Pfam; PF04706; Dickkopf_N; 1.
KW   Developmental protein; Glycoprotein; Signal; Wnt signaling pathway.
FT   SIGNAL        1     22       Potential.
FT   CHAIN        23    349       Dickkopf related protein-3.
FT   DOMAIN      147    195       DKK-type Cys-1.
FT   DOMAIN      208    284       DKK-type Cys-2.
FT   CARBOHYD     96     96       N-linked (GlcNAc. . .) (Potential).
FT   CARBOHYD    106    106       N-linked (GlcNAc. . .) (Potential).
FT   CARBOHYD    121    121       N-linked (GlcNAc. . .) (Potential).
FT   CARBOHYD    204    204       N-linked (GlcNAc. . .) (Potential).
SQ   SEQUENCE   349 AA;  38387 MW;  564CB3C4FB2EAB88 CRC64;

  Query Match             19.6%;  Score 90.5;  DB 1;  Length 349;
  Best Local Similarity   29.9%;  Pred. No. 0.069;
  Matches   20;  Conservative    9;  Mismatches   31;  Indels    7;  Gaps    3;

Qy          7 CDKDSQCGGGMCCAVSIWVKSIRICTPMGKLGDSCH-PLTRKVPFFGRRMH-----HTCP 60
              ||     |  |:|||    :    :|||:   |: || | :: :      :         ||
Db        208 CDNQRDCQPGLCCAFQRGL-LFPVCTPLPVEGELCHDPTSQLLDLITWELEPEGALDRCP 266

Qy         61 CLPGLAC 67
              |  || |
Db        267 CASGLLC 273


RESULT 39
O57464
ID   O57464      PRELIMINARY;      PRT;   259 AA.
AC   O57464;
DT   01-JUN-1998 (TrEMBLrel. 06, Created)
DT   01-JUN-1998 (TrEMBLrel. 06, Last sequence update)
DT   01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
DE   Xdkk-1 precursor.
GN   Name=Xdkk-1;
OS   Xenopus laevis (African clawed frog).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Amphibia; Batrachia; Anura; Mesobatrachia; Pipoidea; Pipidae;
OC   Xenopodinae; Xenopus.
OX   NCBI_TaxID=8355;
RN   [1]
RP   SEQUENCE FROM N.A.
RX   MEDLINE=98111224; PubMed=9450748; DOI=10.1038/34848;
RA   Glinka A., Wu W., Delius H., Monaghan A.P., Blumenstock C., Niehrs C.;
RT   "Dickkopf-1 is a member of a new family of secreted proteins and
RT   functions in head induction.";
RL   Nature 391:357-362(1998).
DR   EMBL; AF030434; AAC02427.1; -.
DR   GO; GO:0005576; C:extracellular; IEA.
DR   GO; GO:0007275; P:development; IEA.
DR   GO; GO:0030178; P:negative regulation of Wnt receptor signali. . .; IEA.
DR   InterPro; IPR006796; dickkopf_N.
DR   Pfam; PF04706; Dickkopf_N; 1.
KW   Signal.
FT   SIGNAL        1     25       Potential.
SQ   SEQUENCE   259 AA;  28865 MW;  C2698DB6D9560457 CRC64;

  Query Match             19.5%;  Score 90;  DB 2;  Length 259;
  Best Local Similarity   34.4%;  Pred. No. 0.059;
  Matches   21;  Conservative    6;  Mismatches   30;  Indels    4;  Gaps    2;

Qy          7 CDKDSQCGGGMCCAVSIWVKSIRICTPMGKLGDSCHPLTRKVPFFGRRMHHTCPCLPGLA 66
              | : : |  |:|||  | |   || |:   |  |    ||    |  :   | |  ||:
Db        181 CLRSTDCAPGLCCARHFWSK---ICKPVLDEGQVCTKHRRK-GSHGLEIFQRCHCGAGLS 236

Qy         67 C 67
              |
Db        237 C 237


RESULT 40
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Q6PQ81
ID   Q6PQ81      PRELIMINARY;      PRT;   350 AA.
AC   Q6PQ81;
DT   05-JUL-2004 (TrEMBLrel. 27, Created)
DT   05-JUL-2004 (TrEMBLrel. 27, Last sequence update)
DT   05-JUL-2004 (TrEMBLrel. 27, Last annotation update)
DE   Putative tumor suppressor Dkk-3/REIC.
GN   Name=DKK3;
OS   Homo sapiens (Human).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX   NCBI_TaxID=9606;
RN   [1]
RP   SEQUENCE FROM N.A.
RC   TISSUE=Liver;
RA   Hsieh S.-Y., Hsieh P.-S., Chen W.-Y.;
RL   Submitted (APR-2004) to the EMBL/GenBank/DDBJ databases.
DR   EMBL; AY587550; AAS86757.1; -.
DR   GO; GO:0005576; C:extracellular; IEA.
DR   GO; GO:0007275; P:development; IEA.
DR   GO; GO:0030178; P:negative regulation of Wnt receptor signali. . .; IEA.
DR   InterPro; IPR006796; dickkopf_N.
DR   Pfam; PF04706; Dickkopf_N; 1.
SQ   SEQUENCE   350 AA;  38340 MW;  E888B5C3F8294D41 CRC64;

  Query Match             19.3%;  Score 89;  DB 2;  Length 350;
  Best Local Similarity   28.2%;  Pred. No. 0.1;
  Matches   22;  Conservative   11;  Mismatches   37;  Indels    8;  Gaps    4;

Qy          7 CDKDSQCGGGMCCAVSIWVKSIRICTPMGKLGDSCH-PLTRKVPFFGRRMH-----HTCP 60
              ||     |  |:|||    :    :| |:   |: || | :| :      :         ||
Db        208 CDNQRDCQPGLCCAFQRGL-LFPVCIPLPVEGELCHDPASRLLDLITWELEPDGALDRCP 266

Qy         61 CLPGLACLRTSFNR-FIC 77
              |  || |   | :  ::|
Db        267 CASGLLCQPHSHSLVYVC 284


Search completed: November  7, 2005, 21:00:03
Job time : 111.587 secs
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